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GEORGE H. ROHÉ, M.D., Editor.

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ORIGINAL ARTICLES.

ARTICLE I.

SUGGESTIONS CONCERNING CHOLERA INFANTUM AND ITS TREATMENT.

By W. F. A. KEMP, M. D., Baltimore.

[Read before the Baltimore Med. Asso., July 14, 1884.]

The following case is presented as a text on this occasion, not for any especial interests its relation may or will contain:

On June 25th, 1884, was sent for, to see F. F., aged 4 months and 2 weeks. I found her with a high fever, tongue dry and heavily coated, stools quite frequent, yellowish in color, slimy and very offensive. Some of the napkins were containing greenish masses, though the color was supposed to be due to the presence of urine that had been voided with the dejection. On a treatment of small doses of calomel and precipitated chalk, the child had in a few days recovered a normal condition. The child was a bottle fed baby, and although the parents exerted the greatest caution in preparing the milk and cleaning the bottle, I was forced to diagnosticate the case as one of simple acute indigestion as seen in nurselings.

In the endeavor to prevent a recurrence of such indigestion, the compound syrup of rhubarb and potash, U. S. P., was directed to be given three or four times daily. This answered well, for the alvine discharges of the child retained a normal, healthy character, occurring twice or thrice in the twenty-four hours, during the period extending from the 29th of June to the 6th of July. Between these dates I visited the child on July 2d. At my visit it was sleeping quietly, and the information given by the attendants, was of a very encouraging character. I did not arouse it, for it was so calmly and peacefully slumbering. They represented the child as being contented, and its operations natural, its stomach not puffed or swollen, in short nothing was complained of at all.

On the 6th of July I was summoned to see this child again. It was seen about 8:30 P. M., and found to be vomiting almost incessantly, discharges from bowels watery and profuse, at very short intervals, its eyes were glassy, conjunctiva and sclerotic were much congested. The great suffusion of the eye could not escape attention, the cutaneous surface was cold and already the Hippocratic countenance was unmistakably portrayed. The pulse was quick, feeble and compressible. The child had slept well the night before, and during the day, as it lay in its carriage beneath an arbor in the yard, which was airy and large, shielded from the direct rays of the sun, it seemed quite well and happy. The condition just portrayed existed up to 5 P. M., when the sudden onset of emesis, etc., brought about the collapse as stated above. To relieve the symptoms, $\frac{1}{20}$ gr. doses of calomel, rubbed up with gum and sugar, were given at intervals of an hour until emesis should be controlled, and for the prostration, camphor water and brandy were given, as indicated by the effects explained to its attendants. The vomiting and purging were controlled, but the patient died with all the symptoms of acute hydrocephalus, within 36 hours from the onset, which occurred about 5.30 P. M. on the 6th.

The question to decide in such a case is: Was it cholera infantum, or was it a condition dependent upon the

former attack, occurring some 10 or 12 days previous, from which it had apparently recovered?

Without entering a discussion or examination of the arguments one way or the other, it is enough to know, that we are forced during the heated spells of this climate, to meet face to face these cases not infrequently, and if they be fortunate enough to recover, that is what we desire; but if they perish, did they die of a choleraic attack, or had the poison been slowly invading and accumulating in the system, until unexpectedly an explosion occurs and the life is lost?

Post-mortems of these unfortunates have not as yet given any special pathological conditions not found in ordinary gastro-enteric inflammations, not due to endemic or epidemic cause. Conditions dependent upon an epidemic or endemic cause, have a very strong clinical proof to sustain them as factors in the production of cholera infantum. There are no certain pathological indications by which the weary physician may guide himself to a haven of opinion, where no storms of discussion or winds of contending doctrine cannot shake the security of his conclusions. No special bacterium, microbe, or micrococcus has as yet been able to substantiate a claim as a specific factor in the production of these affections. It is to be hoped that labors in this direction may not be fruitless in assisting to a solution that will show a cause. Dr. Sternberg, U. S. A., will devote especial attention to this part of the field, during the summer, here in our midst.

In the light of our present knowledge the most acceptable explanation of the cause and origin of thes affections, is in a chemical change, call it fermentation or what you will, which explanation need not bar the presence and development of any peculiar bacterium for each, or a special bacterium for this class of disorders. Suffice it to say, that if the bacterian view of disease is found to stand all the tests of experience and science, we do not, in such chemical theory, prohibit the bacterium from exerting its influence and making itself known by producing this constitutional disturbance accredited it. The life of these bacteria are interesting to study and contemplate, yet the conditions advantageous or absolutely necessary to their existence, cannot find place at this time for comment. We are content to know that the changes that occur in the secretions and contents of the intestines, during the prevalence of other diseases, do not hinder in any way or manner the growth and development of such organisms. The influence of these organisms, when themselves diseased, is too much in its infancy as yet to warrant any positive assertion concerning their action in such a state.

The most tenable position, in these cases, is that which attributes the cause to a dynamo-chemical change, which change can produce all the ills which unfortunately we have too frequently to encounter.

It is impossible to discuss the varying phases these summer disorders in children manifest, it is also impossible to define cholera infantum with such precision, that no one will mistake a gastro-enteritis, an entero-colitis, or what many call a cholera æstiva, including in such all grades of intestinal disease whether exceedingly acute or probably chronic, for the true cholera infantum as found along our seaboard Atlantic coast. The morbid changes observable after death in all, so closely resemble each other, that, given the post-mortem appearance, it is almost impossible to name the affection diagnosticated. Hence much that is written upon the treatment of "*cholera infantum*," so called, really does not apply to the very acute cholera, but to the mere protracted affection, choleraic in character, that attacks the infants in our midst. Many reasons appear that explain why this should be, for cholera infantum, as we have it, is unknown on the Pacific coast, and within a few hundred miles of ou

eastern boundaries. The great rarity of true cholera infantum beyond these limits has caused the confusion in the minds of authors and teachers, and we have the consequent latitude in opinion and treatment. Be that as it may, no discussion of the treatment can be confined to any one phase of the summer disorders of children, and we accept the position as it has been made, and turn now to glance upon the principles involved in treatment.

Rest, absolute rest, should be insisted upon, cleanliness and frequent bathing or sponging, not to an extent to depress, but only enough to keep clean and exhilarate, the most scrupulous attention to diet, and wholesome fresh air, should enter largely into our care of those sick. Yet treatment by medicines must not escape our notice, even though a careful study of the remedies, employed with apparently the most success in alleviating these disorders, points to the conclusion that, undergoing modifications in the human laboratory, and being fitted for absorption and assimilation, they may all, or at least most of them, be regarded as germicidal or antizymotic in their action.

Calomel is converted into corrosive sublimate, the best known germicide, bismuth, chlorides, iodides and bromides all have a baneful influence on bacterian life and on zymotic processes. Iodine, 1 part in 5,000, is known to prevent the growth of bacteria, so with bromine, 1 in 1500. Benzoic acid, benzoate of soda, chlorate of potash have not so marked an effect on spores yet their influence on fermentation, etc., is not unknown. Dilute solutions of allylic alcohol, oils of mustard, peppermint, turpentine and cloves; thymol, chromic, picric, hydrochloric, salicylic acids, and quinine all have a marked influence on bacterian development. This effect is seen in 1 part of peppermint oil in 300,000 parts of water; quinine 1 in 7,800; turpentine 1 in 75,000, and through the list the proportions might be given. But we desist, and rely upon the information thus gained from those making this branch of science an especial study.

Our rational treatment must be based upon clinical experience and pathological anatomy. Colonel J. J. Woodward, Surgeon U. S. A., in writing upon diarrhœal entero-colitis, after rehearsing the arguments in favor of Cohnheim's theory, that increase in lymphoid elements found in autopsies of these patients must enter largely into our estimate of their causes, says "the discovery of such an increase in the number of lymphoid elements, in sections of the submucous connective tissue, may be regarded as conclusive evidence that actual inflammation had existed during life. Simultaneously with the increase in the number of lymphoid elements in the submucous connective tissue, a similar increase takes place in the number of these elements in the adenoid tissue of the mucous membrane and of the closed follicles. No reasonable explanation has been suggested for the fact that the solitary follicles are more conspicuously enlarged than the agminated, the reverse of what usually occurs in typhoid fever."

The recognized agencies manifest in the causation of these diseases are excessive and prolonged heat, atmosphere of crowded or closely built cities and towns, unwholesome diet, and possibly the irritation to sympathetic nervous system caused by the processes of dentition.

The rarity of these diseases in the rural districts, and the generally rapid improvement observed when removed from the crowded or close tenement to a salubrious position, must make us give the greatest possible care to the hygienic surroundings in which we place these patients.

Notwithstanding the participation of the blood in the morbid changes necessary to produce these diseases, and the implication of the ganglionic apparatus of organic life, we hope by

judicious sanitary measures and by more improved therapeutics to lessen greatly infant mortality, and prolong the life of many who now fall into premature graves.

ARTICLE II.

THE SUMMER DISEASES OF CHILDREN.

By JOSEPH T. SMITH, Jr., M. D.

[Read before Baltimore Medical Association, July 14, 1884.]

We have assembled here at the call of our executive committee to take into consideration a class of diseases, than which we find but few that call for so much skill and judgment on our part, and certainly none that demand more accurate and prompt methods of treatment. We have been brought together at a time when these troubles are most rife amongst us, in order that, so far as is possible, we may aid and encourage each other, not so much by discussing new theories and lauding new and untried methods of treatment, but by a mutual interchange of views, keep fresh in our minds all of the multitudinous details, a knowledge of which, these diseases demand that we shall be in possession of. That the subject may not tend in one direction, several will call attention to the matter in hand, and as but one of the many I shall be brief.

The theories, whose name is legion, with regard to the summer diseases of children cannot, I think, have a place here. We meet as practitioners, not as theorists, we rejoice in theories as in a good dessert after dinner, but they are a something superadded, a something which can, if need be, be altogether omitted; they are not the pabulum upon which we feed.

The causes of the diarrhœas and kindred diseases of children are well known; heat, bad living, in its most comprehensive sense, sudden changes from heat to cold, general debility, the irritation of dentition, all these singly as in combinations, are recognized as the exciting causes; why it is that the digestive tract should be made the special point of attack, except that it is unduly taxed when not capable of an honest day's work, we have not time to consider, but trust to hear it discussed from some who will read for us to-night.

We will confine what we shall have to say upon the subject assigned, briefly to the matter of treatment.

First of all we must advance the question which obtrudes itself in every department of life at this day. What is new—what is new in the treatment of the summer diseases of children? We answer: nothing; we shall have little of interest for those who are here merely to hear something new. I am well persuaded that one of the many obstacles to our obtaining good results from treatment oftentimes arises from the fact that, instead of resting content with an older, and which experience has shown to be a safer course, we vacillate, try some of the new methods constantly springing up and thus lose valuable time. The English have much that is praiseworthy in them in this regard, only slowly and after full proofs of their efficiency should new be allowed to displace old methods or cause us to waver for one moment in that treatment which we know, if rigorously carried out, will give us good results. The first in the treatment is that time honored subject of diet. How many times we long for a something new here; day after day we are in attendance upon the little ones who are suffering from the many forms of bowel and stomach troubles, and we must repeat to their parents over and over again the old story of diet, we cannot rid ourselves of it, we constantly see its most obvious demands neglected, until I fear at times we neglect to enforce, with all our powers, Nature's teachings upon the minds of those, who often from sheer carelessness, fail to properly feed their children. It would be a comfort many times if we could write for medicine, instead of going

through with the wearisome task of giving careful and minute directions to the mother what and when her child should eat. I think we want nothing new here, but as physicians whose sole aim is to heal the sick, we want always and under all circumstances to carefully, and laboriously, if need be look to the diet of those committed to our care, and not in a few hasty words, as I have many times seen done, tell the mother what to do; give her full and explicit directions and see that they are carried out to the minutest detail. I think when this has been done but few of us have failed of his reward. I well remember a case which came under my care several years ago and from which I learned a valuable lesson in this regard. I was sent for to see a child suffering from a mild form of diarrhœa during dentition in the summer; I gave the necessary directions as to the child's diet, but the trouble did not cease, and the child became thin and weak. The discharges were watery in character and but few in number, would cease for a day and then return, the child had every possible comfort, and its hygienic surroundings were of the best. At last I strongly advised the child's being sent to the country, but as it was very inconvenient at that time for its mother to go, I thought I would look once more into its diet before insisting upon its being sent away. I did so, went into the kitchen several times myself and with the mother beside me showed her how to fix the food; from that time improvement and cure resulted. The trouble returned upon one occasion when the directions were in part neglected. I had not up to that time given the child's diet that scrupulous care and attention which it deserved. He who will bestow constant and unceasing watchfulness upon the food and its preparation which his little patients get, has a powerful ally in his battle with disease. Bad dietetics, then, is the first enemy to be conquered, and it is because he takes on so many delusive forms that his weak point is often so difficult to find. We cannot hear the subject of diet in children too often, and its kind we can express in a single word—simplicity.

Next to what a child should eat we look to what a child should take in the way of medicine, and here I think all are agreed that drugs should be assigned a secondary place. Do everything else first, diet, cleanliness, fresh air, change of scenery, then a few drugs; let us rather give them the last place in treatment, here they are invaluable, but they wlll not act as a substitute for other means.

I know of no new and infallible remedies. I much question, if ever we will get a single remedy or series of remedies which will do the work for us and save the labor we are now compelled to perform, of nicely adjusting and combining what we already possess to meet the indications of each individual case.

I have left until the last that which should have been first, because in the great majority of cases it is only when all else has been done that we can secure a change of air and scene for our little patients. In this matter of change of location during the heats of summer we find ourselves so governed by circumstances as in many instances to fail in all we undertake and what we know to be the best for our little patients is the thing of all others that cannot be done for them. Our common experience is that all infants get along much better if removed from the close and frequently vitiated atmosphere of the city streets and houses; that the country has been the means of saving many an infant's life, all have ample evidence. For the children of the rich and well-to-do we have little concern in this respect, for people who have well filled wallets can secure all that the world has for them in the way of health, but it is the very poor and those of scanty means, who call most loudly for aid, who cry to us and through us to the people at large to

keep their little ones through the first few years of life. It is only within the past few years that the attention of the people has been turned in this direction, it is only recently that the public has had forced upon it the importance of providing, not for disease, but for the continuance in health of its infantile population. It is needless to dwell upon the importance of the subject, it not only concerns our individual patients but the future welfare of the state. Many of us have been interested to a greater or less extent in an organization established for the purpose of supplying good food and fresh air to the children of those who stand in most need of them, and those of us who have spent much time with them have had ample proof of the good it has accomplished. With its well arranged and ample grounds, its bathing houses and the fact that for two hours or more the infants are given the invigorating sea air, thus taking them to their playgrounds in the most comfortable and least objectionable manner, make the Free Summer Excursion Society one of the most valuable aids we possess in the treatment of the summer diseases of children. Leaving in the cool of the morning aud returning in the cool of the evening the trip down the bay is in itself a source of life and health to many of the children—on the grounds a bathing house furnishes the luxury of a bath to many who never get one at any other time, and milk and bread of the best are supplied to all. When those who have an abundance apply to us for their children, the country, the mountains, the seashore and the ocean all offer their wealth of fresh air to us, but when the poor come I know of no better refuge we can offer them than that is offered by the Free Summer Excursion Society. We have thus a change of scene and fresh air possible for all classes and a means of cure which it behooves us to see does not suffer for want of support. Supplied with good and properly prepared food, with change of scene and fresh air, most infants will do well, but we have thus far experienced great difficulty in the latter respect. To get the poorer class of infants out of the city for a sufficient length of time, and to provide for the many whose mothers cannot be with them is what remains still to be done The society just alluded to is growing in both directions; our aid and encouragement will not fail to bring about the result more speedily.

We must still then continue to build upon the old foundation stones: diet and fresh air. Attempt to build on any other foundation and disaster will more or less certainly be the result. So far as is at present known, if we would build the superstructure of health we must continue to use the old, well tried staves, which have long since proved themselves worthy of all our confidence. No substitute has yet been found for them; many new remedies and methods of treatment have shown themselves from time to time, but diet and fresh air have thus far refused to yield the first place to any. I have purposely refrained from entering upon the manner of preparing the food, and its quality, the various kinds of drugs and the circumstances which call for their administration and the time, when, and place where, fresh air is required, for in addition to being more or less familiar topics to all present, even an outline discussion of them would consume more time than our executive committee would allow us.

We will rest the subject of treatment, therefore, upon the broad outlines just given.

THE present number of the CHRONICLE begins the third volume. Thanking our many friends for their support in the past, we ask a renewal of their confidence—and their subscriptions—for the current year. In return, we promise to make the CHRONICLE even better than in the year just closed.

ARTICLE III.

MICHIGAN STATE BOARD OF HEALTH.

[Reported for the MEDICAL CHRONICLE.]

The regular quarterly meeting of the Michigan State Board of Health, was held in the office of the Board, at Lansing, Mich., July 8th, 1884, the following members being present: John Avery, M. D., of Greenville, President; C. V. Tyler, M. D., of Bay City, Henry F. Lyster, M. D., of Detroit; J. H. Kellogg, M. D., of Battle Creek; Victor C. Vaughan, M. D., of Ann Arbor; Arthur Hazlewood, M. D., of Grand Rapids; and Henry B. Baker, M. D., Secretary.

The Committee on examination of text-books on Physiology and Hygiene with special reference to alcohol and other narcotics, made its report which was adopted.

The Secretary presented a report on four outbreaks of cheese poisoning in Michigan, during May and June, namely at Middleville, Barry Co., Jerome and Jonesville, Hillsdale Co., and Big Rapids, Mecosta Co. All persons who ate of the cheese, were taken sick, (in all about one hundred and sixty-four persons), with the same symptoms, i. e., pain and burning sensation in stomach, intense vomiting and purging, feeble pulse, cold extremities, and tendency to collapse. All finally recovered. The cheeses were ordinarily good looking samples, but when cut or broken a liquid oozed into the pores. In each case the cheese was made at the factory of G. B. Horton, Fruitridge, Lenawee Co. Mich.

Dr. V. C. Vaughan, committee on Foods, also read a report on cheese-poisoning. At the request of the Secretary, he had visited the factory in Fruitridge, and had analyzed specimens of the cheese. Every thing about the factory appeared to be scrupulously clean, and nothing in vats, cans, or surroundings offered any explanation of the cause of the poisoning. Analysis showed no arsenic, copper, lead, iron, or other mineral poison. When the cheese was cut or broken a whitish liquid oozed into the pores, and in the liquid microscopic organisms were detected. The liquid was very strongly acid.

For more than 100 years the attention of the scientific world has been drawn to the subject of cheese-poisoning by repeated outbreaks of this sort in this country and Europe. Much has been written on the subject, and many investigations carried on, especially in Germany. It has been variously ascribed to diseased milk, decomposition and the development of certain fatty acids, etc., but we do not yet know what makes the cheese poison. The manufacturer said the cheese which produced the ill-results was all made between April 26th and May 26th, 1884. It was made in the same manner and with the same care as other lots which had given no cause for complaint. Good cheese is only very slightly acid, and slowly reddens blue litmus paper. The poisonous cheese was intensely acid, instantaneously reddening blue litmus when the paper was applied to the freshly cut surface. This test for poisonous cheese appears to be practicable. The blue litmus paper could be applied by any grocer to each freshly cut cheese. If the litmus paper is instantly turned red by the liquid which oozes into the pores, the cheese is to be suspected as poisonous. Dr. Vaughan's report will be published in the next annual report of this board.

The Secretary reported that smallpox was brought into Rose Lake township, Osceola Co., Mich., June 9, 1884, by a German immigrant, who, with wife and three children, landed in New York, June 4, by steamer "Weser." The immigrant says that on the passage over, there were on that vessel three deaths from smallpox and several cases that recovered. The immigrant was taken sick June 13, and was attended by Dr. Bettes, of Le Roy village, in the adjoining

township of Le Roy, who could not know the true nature of the disease till the eruption took place, soon after which Dr. Bettes himself came down with the disease and has since died. The health authorities of Le Roy village had neglected to appoint a health officer as the law requires, because they thought they would "save a health officer's salary by doing without one." Dr. W. J. Law was then appointed health officer, and he seems to have done very efficient work, as did also Mr. Byron Monaghan, health officer of Rose Lake township.

The townships of Rose Lake and Le Roy united in the construction of two hospitals, which were built June 29. At last report there were ten cases in the hospital, five cases at Tustin, and one at Cadillac.

This outbreak is another illustration of how Michigan and the Northwest suffers from the lack of a careful immigrant inspection service, such as was planned by the National Board of Health, and for a time carried on but discontinued for want of an appropriation.

The chairman of the special committee appointed to examine the sanitary condition of Washtenan and Jackson county jails read their reports which were ordered printed in the annual report of the Board for 1884.

Owing to the spread of Asiatic cholera into Europe, and the liability of its introduction into this county at any time, it was decided to issue a circular to local boards of health on the prevention and restriction of cholera.

The third edition of 30,000 copies of the document on the Restriction and Prevention of Diphtheria being nearly exhausted, it was decided to revise it and issue a fourth edition, of not to exceed 25,000 copies, for general gratuitous distribution in Michigan.

The work of the office in compiling reports of sickness, meteorology, and of proof reading, correspondence, etc., has continued as heretofore. A compilation of the Public Health Laws of Michigan has been printed and is nearly ready for distribution. The document on Restriction and Prevention of Scarlet Fever has been revised and 20,000 copies printed for gratuitous distribution. Proof on most of the annual report has been read and it is now printed up to page 224.

A second demand for the return of names and addresses of health officers has been made on delinquent townships, cities and villages. Addresses of about 1,050 health officers have been received and recorded. As fast as addresses of health officers for 1884 are received, there are sent to each such officer enough copies of the revised circular on the work of health officers and local boards, to supply each member of the board with a copy; documents on the restriction and prevention of contagious diseases are sent with this circular, and a blank for notification to this office of an outbreak of a dangerous communicable disease. During the quarter, about 120 letters and 8,000 documents have been sent to local health officers where contagious diseases have been reported present, the documents being for general distribution among the neighbors, who, it is believed, are more likely to read them carefully at such times.

CORRESPONDENCE.

[The following circular letter has been issued by the officers of the American Medical Association, in accordance with important action taken at the late meeting:]

PHILA., June, 1884.

DEAR SIR:

At the meeting of the American Medical Association held at Washington in May last, an Amendment to Regulation II. was adopted, which provides that—

Membership in the Association shall be obtainable by any member of a State or County Medical Society rec-

ognized by the Association, upon application endorsed by the President and Secretary of said Society; and shall be retained so long as he shall remain in good standing in his local Society, and shall pay his annual dues to the Association.

You will perceive that, as far as such opportunities are embraced, the strength of the Association will be increased and consolidated, so as to unite the profession, and give it a force and influence not otherwise attainable. Without undertaking, however, to point out the advantages of this action on the part of the Association, or to advocate the plan of which it is a main feature, it may simply be said that, as the new departure has been taken, it is for the Association and its constituent bodies to carry it out to the fullest extent, and to give the movement their hearty co-operation.

Applications for membership, in the manner specified above, accompanied with FIVE DOLLARS for annual dues, should be sent directly to the Treasurer, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa.; on receipt of which the weekly Journal of the Association will be forwarded for one year to such member.

Respectfully yours,
WM. B. ATKINSON, M. D.,
Permanent Secretary

ANALECTS.

Puerperal Mastitis.

While puerperal mastitis is rarely a source of danger, it is usually attended with so much suffering, it compels giving up nursing the affected breast, possibly the weaning of the infant, and its occurrence is so often unjustly blamed upon the nurse or the doctor, that a brief study of the disease may be of some interest, and it is hoped of some use. This study will be rendered still briefer by confining it chiefly to the causes of the disease and its prophylactic treatment.

In rare cases parenchymatous mastitis is one of the manifestations of a general pyemic infection, but the great majority have other causes, and among these causes the most frequent are abrasions, ulcerations, or fissure of the nipple—for the latter the French use the word *crevasse*, and it is very expressive, for the great gap which is seen in some cases just at the base of the nipple, a crescent-shaped gap which may go on increasing until the sinuses of milk ducts are opened, or even still more serious destruction of tissue occurs. Now these raw and abraded surfaces, these lesions of tissue, open doors for the entrance of disease germs, and the lymphatics are there in ample number to transport the germs, not only to the superficial but to the deep parts of the gland. I know it is usually held that the milk ducts are the medium by which inflammation is carried from the nipple, but if one will watch the inflammatory process he will see in many, I will not say all, cases the superficial lymphatics showing red-lined paths toward the axilla. Knowing, too, how important a part the extra and intra-pelvic lymphatics play in the genesis of puerperal septicæmia, absorption of the puerperal poison being far more frequent by them than by veins, it is probable that similar vessels here are the carriers of disease. Be this as it may, there can be no question as to the fact that almost all cases of inflammation of the breast in lying-in women begin in disease of the nipple.

Cold is also admitted by most authorities as an occasional cause of mammary inflammation; indeed Delore goes so far as to say that in almost all cases exposure to the cold, is the cause of mammary abscess. Retention of milk is popularly considered, and also by some eminent authorities asserted to be, a cause of mammary inflammation. Schroeder's statement is unequivocal: "Suppurative inflammation of the mammary gland commonly arises through the small chaps of the nipple, and through

the small scab formed on it occluding the excretory ducts of some of the lobes of the gland. The secretion is pent up, the lacteal ducts and gland-vessels are dilated and inflamed, and suppuration begins in their walls." These views will be rejected by some, and by most be regarded as too exclusive.

Kustner, in a recent number of the *Archiv fuer Gynækologie*, discusses this subject, and quotes the opinions of Billroth, Winckel, Spiegelberg and Schroeder. The first two hold that the inflammation generally has its origin in fissures of the nipple, and that the inflammation extends to the connective tissue; retention of milk is secondary, and has nothing to do with the inflammation; while they have not observed epithelial suppuration. Spiegelberg taught that the inflammation passed by the milk ducts to the glandular structure, which became infiltrated, and suppuration followed. Schroeder's views have already been given.

Against the view that retention of milk causes inflammation and abscess are the facts observed in galactocele and in inferior animals, as in the mammiferæ whose young are destroyed; for example, those sluts and cats whose puppies and kittens are cast into the nearest stream or pond, or in the cow who strays off and is days without being milked. A galactocele does not cause an abscess; the unmilked cow does not have inflammation and suppuration of her swelled and greatly distended bag, at least if she does the event is exceptional and may be attributed to bruising of the organ, an accident liable to occur from its immense size. The sluts and cats give no evidence, I believe, of suffering in this way from retained milk. So, too, abscesses in the human female are very rarely observed—almost never observed—at weaning, or if the mother does not nurse her child, or it is still-born.

Nevertheless, it is better not to be too absolute in medical opinions. Possibly there may be some truth in the opinion of Schroeder. I feel more inclined not utterly to reject it, in view of Kustner's recent article. Kustner, who adduces four cases of mammary abscess which were caused solely by secretion-stasis, but who regards this form of the disease as very rare, makes the following the chief points of diagnosis between it and the ordinary phlegmonous inflammation: less local and general disturbance; limitation of the affection to a circumscribed point; quick and complete closure of the retention cavity after an opening has been made.

This is not a mere question of useless theory, for if retention of milk occupies any important place in the etiology of mammary inflammation, there may be some cases in which the effort to draw the milk, thus relieving the dangerous distention—a practice which I need not say is quite common in the lying-in room—is not to be condemned. Nevertheless, such practice used in a case of phlegmonous inflammation is evil, and only evil, and that continually.

But, laying aside the rare forms of mastitis caused by milk stasis, let us consider the prophylactic treatment of the ordinary form of the disease. Recognizing the fact that it originates in disease of the nipple, is simply the extension, probably by the way of the lymphatics, of the inflammation from it to the glandular structure, or to the connective tissue between the lobules and the acini, the prophylaxis must be preventing lesions of the nipple. But lesions of this organ frequently occur from want of care during pregnancy, wrong things are done, or right things left undone. The mamma is very nearly a hemisphere, and from its highest part the nipple rises up something like a low, round tower on the top of a "sugar loaf" mountain. Unfortunately, as a consequence of bad dressing, by which compression of the anterior surface of the breast is made, or from arrest of

development, the tower has not been built, but a level surface occupies the place where its base should rest, or, still worse, a funnel-shaped cavity is found instead of an elevation, a cup takes the place of a cylinder. Even in the last condition an effort should be made to draw out the nipple and give it suitable form and size by daily use of an air-exhausting apparatus. A bottle, the mouth of which will embrace the surface the nipple should occupy, is filled with hot water, the water poured out, the bottle inverted over the nipple—the condensation of the vapor in the bottle makes a vacuum, and thus traction upon the nipple is made—is one of the cheapest and simplest ways of doing this. But as soon as the nipple is developed by such means, or in cases where it is already prominent enough to be seized by the finger and thumb, the patient should be taught to use them ten or fifteen minutes, twice a day, to draw it out to a suitable length. Further, not only should all clothing which may compress the nipple, be avoided, but a firm nipple shield placed over it, fastened, if need be, by strips of adhesive plaster to prevent its displacement. There is thus afforded not only protection from compression, but also space for the growth of the nipple.

Having thus succeeded in giving the nipple suitable form and size, or if these conditions are already present the next step is to make its covering such that it will best resist the agencies which, when the function of the organ is exercised, may injure it. It is needless to say that the common, almost universal practice pursued is to make astringent and alcoholic applications to it; whisky and alum or tannin and alcohol are among familiar means. Now for some years it has seemed to me that this practice was wrong in theory, and that its results were by no means satisfactory. The skin of the nipple must be soft and pliable, and protected from being injured by contact with fluids. Wherever surfaces are to be protected from the action of fluids, nature multiplies sebaceous follicles. See, for example, how numerous they are upon the nymphæ, especially upon their internal surface, one hundred and fifty to the square centimeter. So, too, the nipple is richly supplied with sebaceous glands. Circles of these glands surround the openings of the milk ducts, and seem to have been placed there to protect the skin from the injurious influence of contact of milk and secretions from the infant's mouth; so, too, elsewhere upon the nipple these glands abound. By the frequent bathing of the organ with alcoholic and astringent solutions not only is the secretion from these glands carefully dissolved and washed away, but possibly their orifices obstructed; the skin may be hardened indeed, when nature meant it to be soft and pliable, but it also has less resistance to the continuous application of moisture. Such treatment daily applied to the scalp would soon make it dry, and the glossiest and flexible hair harsh and brittle. No, I believe these applications wrong; they not only do no good, but they do harm.

Rejecting, then, this practice, what care shall be taken of the nipples? First, cleanliness of them, as much as of any part of the body equally exposed. Let them be gently washed each day, adding to the water used a little tincture of myrrh or one-third part of tincture of arnica, if the use of such preparation is more satisfactory to the subject, and each night apply simply a little cocoa butter or vaseline.

But the labor is over—and here danger comes from too early, too late, too frequent, and too long-continued application of the infant at the breast. To apply the baby to the breast immediately after it is born, washed and dressed, is a mistake, but to delay the application for two or three days is still a greater one. Let this application be made eight or ten

hours after labor, and repeated once in six hours until the secretion is established, when the interval may be two hours at first, in the day, and four or five hours in the night. Feeding the baby ought to be absolutely and postively proscribed, unless in very exceptional cases; for with its appetite thus half or entirely satisfied, it dallies in nourishing, keeps the nipple a long time in its mouth, and thus the skin is as surely softened and ready to be detached in parts as the skin of any part of the body would be by the continuous application of a warm poultice. "Having the infant quit when it is done," may seem a homely form of expression, but it is a rule of importance. After every nursing the nipple should be dried with a little tissue paper, it should be washed occasionally, and a little of one of the oily applications previously mentioned made twice a day. If the secretion be scanty and the child vigorous, there is a danger of the nipple suffering—the strong sucking made from hunger instinct is likely to cause injury of the skin. Of course the prophylaxis here will consist in increasing the milk secretion. Should any abrasion of the nipple occur, the compound tincture of benzoin may be applied to the injured surface, but not to the entire organ. Should great pain be produced when the baby nurses, a nipple shield is to be sought.

It is a very difficult matter to say how long nursing may be continued safely, once fissures of the nipple have occurred, how long we may wait, hoping to heal them, letting the nursing go on. Certainly there is a time when the continuance of the nursing, the nipple being unhealed, must in a given case inevitably lead to mastitis. I do not know the boundary line. This much however, is certain, that if mastitis occurs, the infant must not any longer nurse the affected breast.—*Prof. Parvin in Am. Pract.*

Renew your subscriptions.

On the Value of Certain Single Symptoms in the Diagnosis of Diseases of Children.

The *London Medical Record*, May 15, 1884, says: In this paper Emeritus Professor Pollitzer contributes (*Jahrbuch fur Kinderheilkunde*, Band xxi, Heft 1) from his ripe experience some very valuable hints for the guidance of the less initiated. The "single symptoms" which he enumerates are in some cases pathognomonic, and in others are of great importance for differential diagnosis. The first symptom is a *strongly marked nasal or palatal cry.* This is present in, amongst other complaints, syphilitic ozæna, hypertrophied tonsils, and paralysis of the soft palate; but where these can be excluded, it affords very strong presumption of retropharyngeal abscess. Dr. Pollitzer relates that on one occasion he was examining a child when the nurse passed through the room, bearing another, four months old, in her arms. On hearing it give this nasal cry he stopped the nurse, but the mother affirmed that the baby was quite well. However, Pollitzer introduced his fingers and felt the expected swelling. This was incised, and a large quantity of pus evacuated.

The second symptom is *an excessively prolonged, loud-toned expiration, with normal inspiration and without dyspnœa.* This is an early symptom of chorea major, and may precede all other manifestations of the complaint. In illustration of this, the author mentions that he was once called to see a case of supposed croup; but, on observing this peculiar breathing, he felt no hesitation in diagnosing chorea. The mother had observed this symptom about two hours, and stated that it appeared suddenly, when the child was quite well and asleep. The next day he was informed that this breathing continued for another hour, and then gave place to a singing semi-delirium. Later, the ordinary symptoms of chorea developed themselves.

The third single symptom is that of a *high-thoracic, continued sighing inspiration.* The author regards this as almost pathognomonic of weak heart, and of certain cases of acute fatty heart. The breathing differs from that of croup and other stenoses, in that, while the diaphragm is almost passive, the accessory muscles of inspiration are in vigorous action. The symptom is of especial value, because it is early, and furnishes an indication for treatment long before the other signs—such as cyanosis or pallor of the face, thready pulse, cold extremities, etc.—show themselves.

Another "single symptom" of importance is *the presence of a pause at the end of expiration.* This serves to distinguish between laryngeal catarrh and croup, and, when well marked, absolutely excludes the latter. In examining for it, however, the room should be perfectly still, and the ear should be placed close to the patient's mouth. The author relates how he succeeded in diagnosing laryngeal catarrh from the mere presence of these pauses, in a child who had been ill three days with stenotic breathing, hoarseness, and great somnolence. The laryngoscopist who was called in, confidently expected to find well-marked false membranes; but no such were visible, and the child was well in a few days. Another symptom, of which it is important to understand the significance, is the so-called *respiratio stridula.* It consists of slightly noisy, but otherwise normal inspiration and a loud bleating, interrupted (staccato) expiration; it continues day and night, sleeping and waking, with very rare free intervals of ten minutes or a quarter of an hour. It begins soon after birth, and lasts from eight to twelve months. To the physician unfamiliar with the condition, it appears to be a serious affair, and to demand active measures; but, as a matter of fact, it involves no dyspnœa, and does not affect the nutrition or development of the child; moreover, it is very obstinate to treatment, and ultimately ceases of its own accord. The author regards it, therefore, as being within physiological limits, and recommends no treatment.

The next series of symptoms relates to the brain; and the first is a *remarkable drowsiness which makes its appearance without fever or other disturbance, and persists for some time.* Pyrexia, from any cause, is enough to produce drowsiness in a child; but when the latter coincides with a normal temperature, and continues so for twenty-four to thirty-six hours, it becomes a most valuable symptom of commencing brain disease; and the same holds good when the drowsiness sets in upon convalescence from fevers when the pyrexial stages have passed. The only other conditions that can produce this apyrexial drowsiness are narcotic poisons and uremia, but these are easy to differentiate. Another single symptom of great value in the early diagnosis of brain disease is a *very incompressible anterior fontanelle.* This indicates not only increase of the contents of the skull, but also that that increase is due to something more dangerous than simple hyperemia. It is all the more valuable when the child is wasted from any cause. When the swelling is so great as to resemble a wedge, and no trace of pulsation is present, the disease is probably either intermeningeal hemorrhage or purulent meningitis of the convexity.

The next series of single symptoms relates to the *character of the child's cry.* 1. A violent shrill cry, lasting two or three minutes, marked by anxious expression, and occurring about an hour after the child has fallen asleep, and repeated night after night, is probably due to the action of dreams on an irritable nervous system. It can be cured by the administration of a full dose of quinine before bedtime. 2. A cry, lasting frequently five to ten minutes, and recurring periodically several times in the twenty-four hours, indicate, more especially if dysuria have been ob-

served, spasm of the bladder, and can be cured with a dose of belladonna at bedtime. 3. The cry accompanying defecation indicates, as is well known, fissures of the anus. The author says nothing of operation for this, and recommends aperients and an ointment of zinc and belladonna. 4. "A violent, almost continual cry, the hands grasping the head, which is rolled round and round, and buried in the pillow," in the little children, indicates otalgia. 5. A cry, lasting days or weeks, increased on movement, and associated with profuse sweating and fever, is rare, but may indicate acute general rickets. 6. The cry associated with chronic sleeplessness is difficult to relieve, though it frequently appears to have no ill effect upon the child's nutrition. In some cases it appears to be inherited, as one of the parents has occasionally been observed to be the subject of insomnia or hemicrania.

The next series of single symptoms have no particular interdependence. Amongst these are the following: 1. A striking collapse and immobility of the nostrils almost always indicates hypertrophied tonsils. 2. A weakness and immobility following a short illness, and out of all proportion to such a slight cause, is very frequently the first symptom of infantile paralysis. 3. A single symptom of importance, in a condition which is sometimes void of symptoms (congenital idiocy), is the habit the infant has of perpetually and automatically placing the hands in front of the face. 4. A stiffness of posture and gait, with a pained expression on changing position, is an early symptom of spondylitis. 5. Obstinate vomiting after every kind of food, and lasting for weeks, indicates in a child whose fontanelles are closed, and whose cranial circumference is large, the supervention of acute upon chronic hydrocephalus. The author, in conclusion, is careful to give the oft repeated warning against diagnosing a disease from a single symptom—a real pathognomic symptom being rare. He claims for his observations, where these are original, the merit of facilitating diagnosis at a stage when treatment is likely to be followed by rapid benefit.—*Quarterly Compendium.*

Dermatitis Herpetiformis.

In a paper with this title, read at the recent meeting of the American Medical Association, Dr. Louis A. Duhring, of Philadelphia, grouped a number of cases of rare disease of the skin which he had met with from time to time, having some features in common with several well-known diseases, notably herpes, pemphigus, and eczema, but which, nevertheless, was distinct from these affections. It manifested itself by the formation of erythematous patches of urticarial or erythema multiforme-like character; variable-sized, irregularly shaped or stellate, flat or raised, more or less grouped herpetic vesicles; blebs of similar character; pustules, flat or acuminate, whitish in color, with a more or less inflammatory base; and papules, vesico-papules, and variously sized, circumscribed infiltrations, all the lesions inclining to assume an herpetic character (taking herpes zoster as the type of eruption), accompanied with violent itching. One or another of these varieties of lesions might be present as one, or, as often happened, they might appear together as a mixed or multiform eruption, or the several forms might succeed one another during an attack or as a subsequent relapse. The disease was remarkable for the multiformity of lesion. Thus it might be divided into the erythematous, papular, vesicular, bullous, pustular, and multiform varieties. The erythematous variety bore some resemblance to urticaria, and especially to erythema multiforme, the variegation in color and pigmentation calling to mind the latter affection; but the course of the disease was chronic, this variety usually giving way sooner or later to the

three forms of eruption. The vesicular variety was of more frequent occurrence, the lesions varying in size from a pin head to a pea. They were usually flat, irregularly shaped, angular, glistening, pale-yellowish, firm, and as a rule, unaccompanied by areolæ. They were aggregated, or occurred in little clusters of two or three, and might coalesce. The eruption was usually profuse, and, as a whole, was generally disseminate. In chronic cases there was considerable pigmentation. The itching was intense. The bullous variety showed blebs, having general characters like the vesicular variety, and was liable to be mistaken for pemphigus. The pustular form exhibited itself in variously sized, rounded or flat, usually tense, whitish pustules, resembling impetigo and ecthyma. They inclined to flatten and spread on the periphery, crusting in the centre. They possessed, usually, "angry-looking" areolæ, and had a "drawn-up" or "puckered" appearance, and, like the other lesions, tended to be angular in outline. They inclined to form in groups of two or three or more, which might coalesce. The grouping was further peculiar in that the central pustule was often immediately surrounded by a variable number of smaller (pin-point or pin-head sized) pustules, sometimes in a circular form, as in herpes iris. But this arrangement was not constant.

In all the varieties of dermatitis herpetiformis there was a disposition for the lesions to manifest themselves in patches or in groups, taking on an herpetic character, and to extend about the periphery. A variable amount of constitutional disturbance was present, especially with each new outbreak. The itching and burning were violent. The disease showed a marked tendency to appear in crops, and, moreover, to relapse, its course often extending over years. All regions were liable to invasion. It occurred in both sexes, and usually in early adult or middle life. It was often met with during the parturient state, and was a serious disease, the pustular variety being especially grave. It was very rebellious to treatment. It was a neurotic manifestation. The author had encountered fifteen cases.

He concluded with the following *resume:* 1. The existence is shown of a distinct, clearly defined, rare, serious, herpetic disease of the skin, manifesting itself usually in successive outbreaks, characterized by more or less systemic disturbance, a variety of primary and secondary lesions, and severe itching and burning. 2. The disease is capable of appearing in many forms, having a tendency to run into one another irregularly, the principal varieties being the erythematous, vesicular, bullous, and pustular, which may occur singly or together in various combinations. 3. The disease is protean in character, and is remarkable for its multiformity. 4. The pustular variety is the same manifestation as that described by Hebra under the name "impetigo herpetiformis." 5. The term "dermititis herpetiformis" is sufficiently comprehensive and appropriate to include all varieties of the disease. 6. It may occur in both sexes, and in women independent of pregnancy. 7. It usually pursues a chronic, variable course, lasting years, and is very rebellious to treatment.—*N. Y. Med. Journal.*

THE Alumni Association of Jefferson Medical College, has inaugurated a movement to secure the endowment of a memorial professorship to be designated *The Samuel D. Gross Professorship of Pathological Anatomy.* This is an especially appropriate manner in which to commemorate the great services rendered to American Medicine and Surgery by the late Professor Gross We trust the response to the committee having the matter in hand will be generous. Dr. R. J. Dunglison, of Philadelphia, is Treasurer, to whom contributions may be sent.

The Medical Chronicle.

A Monthly Journal for the Practitioner.

GEORGE H. ROHÉ, M. D., Editor.

☞It is requested that all literary and business communications, books for review, exchanges, etc., be addressed to, and all checks, drafts and post-office orders drawn to the order of

DR. GEORGE H. ROHÉ,
Cor. Greene & Mulberry Sts., - Balto., Md

BALTIMORE, AUGUST, 1884.

EDITORIAL.

"Bidding for Students."

Under the above caption, the *Philadelphia Medical News* of July 19th, complains of "the practice of a Baltimore medical college, of sending out with its catalogue a circular inviting the physicians receiving it, to recommend young men for admission on certain privilege terms." It is further stated that the "privileged student," is admitted for "half the usual fees, which, without this reduction, are less than those of first-class medical colleges."

The editorial in the *News* fails to specify by name, the college which has given offence to certain members of the profession in Philadelphia, by the action above stated; but, on examining the catalogues of the recognized medical schools in this city we find that the regular fees charged for attendance on each term are as follows: College of Physicians and Surgeons, $120; University of Maryland, $120; Woman's Medical College, $75. Both the first named admit "special privilege" students under the conditions published in their catalogues, while the Woman's College makes a deduction of 20 per cent. from the fees for each student taking a three years' course, which makes the fee in the latter institution, exactly equivalent to the "special privilege" fee in the two former.*

So far as known to the writer, the regular fees of the two schools named above, have always been the same; certainly they have not been reduced within the last twelve years, while, on the other hand the "special privilege" fee has been increased in both. The scheme of classification of medical schools on the basis of the fees charged, is certainly an original one with the editor of the *News*, and will hardly meet with the approval of his colleagues in the Philadelphia schools, since it would deny that a single first-class medical college exists in the Quaker City. On the *News'* scheme of classification, Harvard would be the only first class college in the country since her fees are the highest, being one-fourth larger than those of the University of Pennsylvania, and over one-third higher than those of the Jefferson Medical College. Consequently, according to the *News'* scheme, the latter two schools are a considerable distance below first-class.

But the opinion of the editor of the *News* upon this subject is worth just as much as that of any other journalist; no more. Doubtless he thinks that all the medical colleges advertising its columns are all strictly first-class. Let him examine their fee tables.

This question of classification is, however, a mere side issue. The main point is, whether it is dishonorable, or "degrading" as the *News* intimates, to offer special pecuniary terms to special classes of students. We do not think it is either. According to the catalogue of one of the schools mentioned above, "privileged students" are only received upon the recommendation of preceptors. We fail to see anything dishonorable in assisting deserving students to obtain a good medical education by remitting part of the regular tui-

* The Baltimore Polyclinic being a post-graduate school, its fees cannot be compared with any of the schools mentioned above.

tion fee. If that be granted, then we do not see how it can be "degrading medical education" to inform physicians where their students can obtain such advantages. Provided a school performs the promises it makes in its public announcements, and the Baltimore schools above mentioned challenge any failure in such performance, no one, not even the editor of the *News*, has the right to criticise its business management, unless dishonesty can be successfully charged in the latter.

If the *News* knows any existing medical college in Baltimore which pursues dishonest business methods, or is guilty of questionable practices in attracting students, or has "merited the reproach of the profession" by sending out "half-educated doctors," let it give the names. We pledge our aid in holding up such institutions to the contempt of honorable men. We have in these columns, and elsewhere, expressed our opinion very emphatically on the subject of disreputable schools and fraudulent diplomas. We shall do so whenever the occasion arises. We will join the *News* in any practicable movement to raise the standard of medical education, and make the conditions of admission to the profession more stringent, but all such agitations will fail so long as they are confined to regulating fee-tables, or to impertinent comments upon honorable and energetic business methods.

If the *News* wants to engage in a crusade against the admission of unqualified men into the profession, the CHRONICLE will not be behind in the fight. If, however, the *News* is merely a propagandist for Philadelphia medical schools, we decline to be caught by its chaff.

The East Indian Scourge.

The epidemic of cholera which prevails at present in several French cities on the Mediterranean coast, and which threatens to spread throughout Europe, causes much apprehension in this country, where its early advent may reasonably be looked for. The intimate commercial relations between this country and the various States of Europe render it almost impossible to prevent the pestilence from being brought to our shores. Whether our quarantine guards shall be able to keep it from forcing an entrance, remains to be seen, although past experience does not encourage any great degree of confidence in the efficiency of our quarantines.

In the CHRONICLE of last September, we ventured to call attention to "the more than probable invasion of this country by Asiatic cholera" within a twelvemonth. Fortunately, this guarded prediction has not yet been verified, but the introduction of the disease into Liverpool, with which United States ports have almost daily intercourse, must excite the gravest apprehension.

A rational and efficient system of maritime inspection can do much to prevent the entrance of the poison, and hence our quarantines both local and national should be rigidly administered. Of vastly more importance, than quarantine, however, are local measures of sanitation, whose objects should be to place every community in such a condition, that the virus (or germ) if introduced, shall find no congenial habitat or breeding place.

The discovery by Koch, of a characteristic bacterium, even if verified, does not alter the character of the prophylactic measures that must be adopted. Pettenkofer, Hirsch, Peters and many others had studied the habits of the disease and written its history long before Koch trained his microscope upon it. The latter's researches have thrown no new light upon its prevention or treatment.

We must endeavor to secure clean soil under our feet, pure water to drink, proper food to eat, uncontaminated air to breathe. With these conditions present, we could defy the pestilence. It must, however, be confessed that in our larger cities all these

conditions together are unattainable. The pernicious system of the disposal of human excreta, especially in this otherwise lovely city of Baltimore, by diffusing them through the soil, poisoning both air and water, is calculated rather to promote the rapid propagation of the virus of cholera, as well as other infectious diseases.

In addition to the very necessary cleaning up of streets, lanes, alleys, back-yards, cellars, cess-pools and sewers, we would call the attention of our city authorities to the vital importance of AT ONCE removing all the pumps that still remain scattered throughout the city. If not removed some of them will certainly, as heretofore, prove foci of infection. Baltimore has now such an abundant supply of pure water, almost beyond possibility of contamination by infectious matter, that, in face of the approaching danger, it seems almost criminal to allow the death-dealing pumps to remain. Our health department certainly cannot be ignorant of the fact that the pumps are a source of grave danger, not only in the event of the introduction of cholera, but, constantly, as foci of typhoid fever and other diseases. Is the department willing to take the other horn of the dilemma, that the public health is of too little consequence, to take *all* possible precautions?

A Fine Occupation for the Attorney General of the State of Maryland.

Time was when a gentleman holding in this State the exalted office of Attorney General, had too nice a sense of the proprieties of his position to descend to recommend, in his official capacity, a quack preparation as is done in the following communication, which is being extensively advertised in the newspapers:

The State of Maryland.

OFFICE OF ATTORNEY GENERAL,
WESTMINSTER, MD., April 28, '84.

Chas. C. F. Schroeder, Esq.—Dear Sir: I am personally well acquainted with Dr. J. W. Steele and Dr. Wm. M. Hines. They are practicing physicians of this county, of excellent standing and large experience, and thoroughly competent to speak as to the merits of your Iron Tonic and Blood Purifier.

Very truly yours,
CHARLES B. ROBERTS.

Mr. Roberts is at liberty to recommend, in his private capacity, any quack preparation he pleases, but we decidedly protest against the prostitution of the Attorney General's office to any such business.

CURRENT LITERATURE.

Elementary Principles of Electro-Therapeutics. With 135 Illustrations. Prepared by C. M. Haynes, M. D. Designed for the use of Students and Practitioners. Chicago: McIntosh Battery Company. Price, $2.00.

This book is issued by the McIntosh Company as a guide in the use of their electrical apparatus. It contains a summary of the science of electricity; its author disbarring criticism by declaring it to be written for students. The various McIntosh batteries are extremely useful, they polarize but little and they stand well the test of a long acquaintance.

The therapeutic indications for the use of electricity are stated and described not too enthusiastically, as is sometimes the case.

On page 373 is a cut illustrating a double uterine electrode, invented by the reviewer, to whom, however, no credit is given. He does not feel aggrieved since it has proved totally useless, being constructed on false principles. The best uterine electrode, in his experience, is one made for him by Messrs. Arnold & Son. It consists of an Emmet's prode, the point of which is left exposed for about two inches, the handle insulated with a piece of rubber tubing; on the flat end is a socket for the insertion of the end of the wire cord.

With this apparatus worked by a McIntosh galvanic battery, and using the other electrode in the hand or on the abdomen, valuable therapeutic results have been secured, especially in subinvolution.

It would pay every purchaser of any battery to get also one of these manuals, as it contains many profitable hints, which can be learned otherwise only after long and annoying experience. L.

A Treatise on Ophthalmology. For the general Practitioner. By Adolph Alt, M. D., St. Louis. J. H. Chambers & Co.

This small work is presented to the profession to meet the wants of the general practitioner who desires to acquire a clear idea of the principles of ophthalmology, and who would not read some of the excellent English and American manuals to which the author refers, on account of being overburdened with details regarding subjects in which he has no interest.

The work certainly offers a very large amount of practical information that can be appropriated in a very short time, which, to the busy practitioner, is a consideration of no little moment. It will be found useful to those who have but a slight acquaintance with eye affections, and in whom some interest must first be awakened before they can be induced to undertake their more careful study.

The book makes the impression of having been written in somewhat of a hurry; for in his efforts to condense, the author has crowded out very important facts. We have been particularly struck with this idea in reading the part relating to purulent conjunctivitis, in which not the slightest mention is made of the necessity for the frequent removal of the discharges. We also feel forced to state that it is not generally regarded as safe to treat gonorrhœal conjunctivitis with the weak solutions of nitrate of silver which the author recommends.

The work is amply provided with diagrams which illustrate their subjects well. A. F.

Quarantine and Sanitary Operations of the Board of Health of the State of Louisiana, during 1880, 1881, 1882 and 1883. By Joseph Jones, M. D., Prest. Board of Health.

In addition to the operations of the board of health as described in the title, this work of 393 pages, contains an exhaustive history of quarantine in Louisiana, and a number of other papers, medical, sanitary, and statistical, by the author.

The book is a valuable addition to the library of the sanitarian, and we hardly know which to admire most, the industry of the author, or the complaisance of the state legislature which authorized its publication.

PAMPHLETS.

Quarantine. By Walter Wyman, M. D., Surgeon U. S. Marine Hospital Service. Reprint from Report of Md. State Board of Health.——Congenital Lipoma. By A. Jacobi, M. D. Reprint from *Archives of Pediatrics*, February, 1884.——Petition of the New Orleans Auxiliary Sanitary Association to the General Assembly of the State of Louisiana, in favor of a law requiring the teaching of physiology and hygiene in the public schools.——Board of Health of the State of Louisiana. Inaugural address of the President, etc. Reprint from *N. O. Med. and Surg. Journal*, May, 1884.——Annual Report of the Managers of the Western Pennsylvania Hospital for the Insane——Bright's Disease of Malarial Origin. By I. E. Atkinson, M. D. From *American Journal Medical Sciences*, July, 1884.——Address on Practical Medicine. By John V. Shoemaker, A. M., M. D.——Quarantine and Commerce.——An Improved Quarantine System an Obligation of the State. Addresses before various bodies by Joseph Holt, M. D., Prest. Board

of Health of Louisiana.——Annual Announcement of Memphis Hospital Medical College.——Report of proceedings of the Tennessee State Board of Health.——Prevention and Restriction of Cholera. Issued by the Michigan State Board of Health.

FLOTSAM.

THE Woman's Medical College o Baltimore has adopted the 3 years' graded course.

A FEW of our subscribers are still in arrears for the volume just closed. This is a good time to pay up.

THE American Dermatological Association will meet at West Point, New York, September 3, 4 and 5.

THE second Sanitary Convention of Maryland will be held at the Blue Mountain House, W. M. R. R., September 17-19.

WE beg to remind our subscribers that all post-offices issue postal notes, by which money in sums less than five dollars can be sent conveniently, economically, and safely.

PROF. SIMON, of the College of Physicians and Surgeons, has written a text-book of chemistry, which is now in the press of H. C. Lea's Son & Co., of Philadelphia. It will be out in time for the coming session.

THE Waring system of sewerage has recently been applied in a limited section of the city of Paris, and has proved an unqualified success. The municipal authorities of that city are now considering its extension, and for that purpose have instituted an official preliminary inquiry by experts.

SUBSCRIBERS are reminded that the present number of the CHRONICLE begins a new volume, and that there is no way in which they can better show their appreciation of the editor's labors than by promptly forwarding the annual subscription. A postal note is the most convenient method of sending the amount.

THE *Western Lancet* of San Francisco has consolidated with the *Pacific Medical and Surgical Journal*, and the two journals will hereafter be issued under the joint charge of the editors who have made both these periodicals true representatives of advanced medical science and art. We hope the union will be a harmonious one.

OUR enterprising contemporary, the *Medical World*, of Philadelphia, has issued an inducement to subscribers in the form of a chart showing nearly everything worth knowing about "the Urine in Disease." We have tacked the chart up in our office and find it of great use. The subscription to the *World*, including the chart, is $1.00 per year.

MESSRS. J. U. AND C. G. LLOYD have commenced the issue of an elaborate work upon the medicinal plants of North America. The work is entitled, "*Drugs and Medicines of North America.*" It is issued in quarterly numbers of 32 pages each, fully illustrated with wood-cuts and full-page plates. The subscription price is only one dollar per year. The venture is one that deserves the support and encouragement of every progressive physician in the country.

FINE celery is probably a gastronomic desideratum with many of our readers. We confess to a weakness for a crisp stalk of the vegetable ourselves. Mrs. H. M. Crider of York, Pa., has written and published a short pamphlet upon the art of growing the plant by a new method. Any one interested can obtain it by sending 25 cents to the above address. If the author's claims are not exaggerated, we feel sure we shall earn the thanks of our country subscribers by calling their attention to a method of celery culture which promises plants "three feet high with a solid heart from six to eight inches in length."

The Medical Chronicle.

BALTIMORE, SEPTEMBER, 1884.

ORIGINAL ARTICLES.

ARTICLE I.

RHUS POISONING.

By W. W. LEONARD, M. D., South Evanston, Ill

Rhus toxicodendron and rhus radicans, two varieties of the rhus known by the common terms, poison oak and poison vine or ivy, abound in waste places, in woods and along fences, from Canada to Georgia. They are especially abundant in the region bordering upon the Great Lakes. I shall not attempt a botanical description of these plants, as that may be readily obtained from any systematic work on botany, or in the last edition of the U. S. Dispensatory. Their appearance is quite familiar to people living in rural districts, who soon learn to avoid them as a potent enemy. These plants assume great importance to the practitioner in view of the fact that they are capable of causing a skin lesion which not only occasions severe suffering but often tries the skill of the physician.

The leaves when bruised emit a milky juice which contains an acid known as the toxicodendric acid. Upon exposure to the air the juice causes a black stain upon linen which resists the action of water and alcohol. Ether dissolves it. Contact with the plant is sufficient to produce the skin eruption in some persons, while others are only poisoned by the juice. There are a few persons who claim immunity from the poisonous action. These people are unfortunately in a small minority.

The symptoms of rhus poisoning vary widely both as to the character of the eruption and its extent or violence. Its first manifestations occasion intolerable itching, redness and a sense of burning in the skin; vesicles are produced in most cases, yet the parts may be in appearance not unlike a severe burn from boiling water. I have seen the epidermis of the fingers and hand come off like a glove from the intense action of the poison. When the face is affected great swelling sometimes results. The appearance is not unlike that of facial erysipelas. I have observed the eyelids so affected that vision was next to impossible. In making the diagnosis it is only necessary to get a careful history of the case, with the occupation of the patient. Where the history is imperfect or in cases where the disease has become chronic, more care is necessary in arriving at a proper diagnosis.

As regards prognosis, many cases get well spontaneously in a week or ten days. Many cases show a tendancy toward chronicity. I have seen some obstinate cases of eczema commencing with rhus poisoning. In a few cases a tendency to pruritus manifests itself after all evidence of the skin eruption has disappeared, even one, two or more years afterward.

Treatment: I have used with excellent results the following prescription:

℞ Tinc. lobeliæ, ℥ ij.
Sodii bicarb., ʒ j.
Aquæ, . . ℥ ij. M.

Sig.—Apply constantly on soft linen or lint. At the same time have the bowels open freely with salines. The above has been successful in my hands in many severe cases. I have also used the following with prompt relief in one case where the face and hands were greatly swollen and moist:

℞ Sodii hypo-sulphitis, ℥ j.
Aquæ, . . Oj. M.

Sig.—Apply as above.

A U. S. Army surgeon who has had extensive experience in the Mississippi Valley, claims specific powers for spt. ætheris nit., applied without dilution, several times a day. The cases of eruption upon the forehead where leather hat bands come in contact with the skin, are due, in many cases, to rhus poisoning according to the same authority. The rhus toxicodendron often clings to the oak bark of trees so closely that they almost become a part of each other. The oak bark impregnated with the rhus toxicodendron is employed in tanning the leather used in hats, hence the eruption on the forehead. Spt. ætheris nit., he claims, will cure this eruption. I have given spt. ætheris nit. a test in one case with the results claimed. But the lobelia and the alkaline applications have served so well that I have no desire to abandon them. Homœopathic physicians in this region use

Bromini, ℥ ss—j.
Ol. olivæ, ℥ j. M.

Sig.—Apply two or three times a day.

ARTICLE II.

RUPTURE OF THE UTERUS.

By J. G. RIDDICK, M.D. Norfolk, Va.

On the 14th of August, 1884, I was called in haste to see Mrs. L., about 40 years old, and the mother of several children, who was reported by the midwife in attendance to be suffering in a severe labor. On arrival at the patient's bed-side, I found that she had been shortly before delivered of a large, living female child, weighing 15 pounds. The patient was pulseless, pallid, cold, covered with a clammy sweat, and evidently dying. There were no signs of post-partum hemorrhage, and the nurse stated that very little blood had been lost, and no water had passed away. Introducing my hand into the uterus, I found a large rent on the posterior surface of the organ, extending to the fundus. The placenta was in the abdominal cavity. No attempt was made to remove the placenta on account of the collapsed condition of the patient. In a few minutes she was dead. The midwife who was present, gave the following history of the case: The patient expected her confinement in May, but was not taken in labor until the 13th of August, the day before I saw her. Her labor appeared to progress normally until just before the child was born, when she became deathly pale, and declared that she would die. She grew very restless and tossed about on the bed, complaining of great pain. The midwife had ruptured the membranes, but no fluid had been discharged, and the loss of blood was rather less than usual. The after-birth had not come away.

After the woman's death, I again passed my hand into the uterus for the purpose of ascertaining more exactly the condition of things. The os uteri was only large enough to admit my hand, which is quite small, with some difficulty. The rent in the uterine wall before described, was of sufficient size to permit my hand to pass readily into the abdominal cavity, where the placenta was found. The uterus contained a loop of intestine. There was considerable bloody fluid in the cavity of the belly. The perineum had been ruptured to the sphincter ani.

The rupture must have taken place just at the birth of the child, which had evidently been retained in the uterus over the normal time. The history of the case led me to suspect rupture of the uterus before an examination was made.

The statistics of the frequency of this accident vary with different authors. Burns, Ingleby, Churchill, Leishman and Jolly, vary from 1 in 940 to 1 in 2433.

The case here reported is one in which the early use of the forceps would have saved the mother. As the child was already born when

I arrived, I could, of course, do nothing beyond giving stimulants to endeavor to avert death. Laparotomy was out of the question on account of the collapsed condition of the patient.

The child is living and doing well.

ARTICLE III.

INTERNATIONAL MEDICAL CONGRESS.

[Condensed from Cable Report in "Med. Record."

The eighth session of the International Medical Congress was held in Copenhagen, Denmark, August 10 to 16, 1884.

The session was opened with a cordial address of welcome by Professor Panum, of Copenhagen, which was responded to by Sir James Paget, Prof. Virchow and M. Pasteur. The Kings and Queens of Denmark and Greece attended the opening session.

The first scientific address in the general session was by M. Pasteur on the *micro organism of rabies*. A commission of the French Government had examined the results obtained by Pasteur in inoculating the cultivated microbe of rabies, for protection against the disease. The results were as follows: Twenty-three dogs had been inoculated with modified virus. All of these were afterward bitten by rabid animals, but all had remained healthy. Of nineteen unprotected animals, similarly bitten, fifteen went mad. These experiments would be repeated.

Prof. Tommasi Crudeli, of Rome, the discoverer of the *bacillus malariæ*, delivered an address upon the *natural production of malaria, and the means of making malarial countries healthier*.* Prof. Crudeli stated that the specific cause of malarial fevers is not exclusively of paludal origin, nor a product of putrefaction. He referred to the familiar fact that there are many marshes without malaria, and many malarial districts which are not marshy. The only theory which will rationally account for all habits of malaria, is that which refers its cause to a parasitic organism. A number of observers had claimed to discover the cause in vegetable organisms, and five different species of algæ had been described by different observers. These discoveries were unproductive, however, until Klebs and the speaker had, in 1879, succeeded in establishing the etiological connexion between a form of bacillus, since named *bacillus malariæ*, and intermittent fever. Very recently Marchiafava and Celli have demonstrated that the germs of this bacillus directly attact and destroy the red blood-corpuscles.

The *bacillus malariæ* requires three essential conditions for its development and infectiveness. These conditions are a prolonged temperature, not falling below 67.5° F.; a very moderate degree of permanent moisture of the soil, and the direct action of the oxygen of the air upon the strata of earth, which contain the organism. The absence of either of these conditions prevents the development of malaria.

Nature sometimes suspends one or more of these conditions, and thus checks the production of malaria. In winter, by low temperature, in summer, by drying out the upper strata of soil, and finally by forming a natural matting of the earth and the roots of grasses, which prevents the free access of the air to the underlying strata.

In two of these directions, man, in attempting to check the production of malaria, imitates nature, namely, drying the soil by drainage, and covering a malarial soil with uninfected earth, or with a close turf. Crudeli does not think the planting of Eucalyptus trees has much, if any effect in diminishing malaria.

Individual acclimation against malaria is impossible. Racial acclimation has certainly existed in the past, when it was developed by natural selection. Among civilized races of the present day acclimation

*See "Medical Record," August 23d, 1884,

in a malarious soil has become impossible. Individual resistance can however be increased by certain personal prophylactic treatment. The tincture of eucalyptus is useless except from the alcohol contained in it. Arsenic is, however, of great value, in doses of about $\frac{1}{30}$ grain and increasing gradually to $\frac{1}{6}$ to $\frac{1}{5}$ grain a day. Another prophylactic remedy is a decoction of lemon, made by boiling a sliced lemon in three glassfuls of water down to one glassful, and drinking this fasting. The latter is also an efficacious remedy in chronic malarial infection.

Sir William Gull, of London, gave an address on *the international collective investigation of disease.* The time has come, said the speaker, when organized co-operation as against scattered individual efforts in the investigation of disease, should be encouraged. The field of scientific medicine was too large to be compassed by any other means. The amount of work that could be accomplished by a systematic direction of numerous workers was practically without limit, and was proportionately valuable. By such means facts could be accumulated on a large scale, and be utilized accordingly.

Prof. Virchow, of Berlin, delivered an address on *metaplasia.* The speaker said he had made the first step toward the cellular pathology thirty years ago, when he announced his doctrine *omnis cellula e cellula.* All organic operations occur within cells. The supply of nutritive material to the cells was regulated by certain automatic processes, so as to be kept at the proper mean. He then spoke of the phenomna of growth and the production of new tissue forms, which he designated "metaplasia." He described the various theories of bone formation, and showed the difference between ossification and calcification. He also spoke of the formation of bone-marrow, which being a tissue of changing form, furnishes a good example of metaplasia. He explained the pathology of osteo-porosis and osteomalacia, and referred briefly to t he development of tumors. Lastly, he spoke of the white blood-globules, and of their ability to furnish new tissue.

Prof. P. M. Panum, the president of the congress, delivered an address on *food rations in health and disease.* He called attention to the great importance of a knowledge of the proportions of the different classes of foodstuffs necessary in a properly constituted ration, and offered the following propositions:

First.—Endeavor to obtain information as complete as possible concerning the rations furnished to the healthy, or relatively healthy, inmates of hospitals, infirmaries, and prisons, as well as to the soldiers and sailors of different countries.

Second.—Endeavor to obtain, by similar information, and with the assistance of the hospital authorities in the different countries, comparative tables of the proportions of albuminoid substances, fats, and hydrocarbons contained in the regular diet lists, together with the indications for the employment of one or the other kinds of diet as used in hospitals.

Third.—It would, however, be necessary to know first of all: (*a*) whether the individuals living upon a regulated form of diet are ever given any other food, whether this extra nutriment is given with regularity or not, and whether or not the amount of food so given can be determined with accuracy; (*b*) whether the distribution of these rations is so systematized that there is nothing in excess from which the hospital officers or attendants may derive an illegal profit; (*c*) whether the distribution is as just and equally proportioned as possible; finally, whether the food for the attendants is prepared in other vessels than is that for the patients.

Fourth.—Obtain information as to the system employed to control: (*a*)

the good quality of the ingredients, and (*b*) the preparation and distribution of the food.

Fifth.—Insist upon the necessity of according to the physicians unrestricted liberty in the regulation of the absolute and relative proportions, of albuminoid substances, fats, and hydrocarbons which should be contained in the hospital diet. This liberty should be absolute, unfettered by any previous regulations, and free from interference on the part of the hospital authorities.

Sixth—Encourage the publication in different countries of cook-books for the sick. These books should be in accord with the dietary custom of the countries in which they are published, and should indicate the proportions of albuminoid substances, fats, and hydrocarbons contained in the various dishes, in the same way as the doses of medicinal substances are indicated in the pharmacopœias.

Seventh.—Every physician should have suspended on the wall of his office a chart, after the model of Konig's showing the quantitative composition of the ordinary aliments. In this way the importance of a rational dietetic regime would be constantly before his mind, and the chart would aid him in his dietetic prescriptions.

Eighth.—Those who make a study of popular hygiene, and who are able to do so, should occupy themselves with the preparation and rational composition of a dietary, which should be sufficient and as cheap as possible to effect an amelioration of the lot of the poor.

Dr. J. S. Billings, U. S. A., extended an invitation on the part of the American Medical Association, to hold the next meeting of the congress in the city of Washington in 1887. The invitation was accepted by a considerable majority.

There were 64 Americans in attendance on the congress, among them being Drs. Austin Flint, Sr., N. S. Davis, J. S. Billings, J. Solis Cohen, A. Jacobi and others. The inevitable Sayre was also present, with his plaster-of-Paris jacket.

The work of the sections was of a practical character, the discussion on *antiseptics in surgery*, bringing out many of the leading lights in the profession.

The sessions ended on Saturday, August 16th, with congratulatory addresses by a number of prominent members of the congress. There were nearly eleven hundred members in attendance. The social features were attractive and lavish, but were admirably arranged so as not to interfere with the scientific work of the sessions.

CORRESPONDENCE.

Cold Water Dressing in Stab of the Chest.

Editor "Medical Chronicle."

On June 15th, I was called to see Nelson B., a strong, hearty young man, aged 22. He had been stabbed in the back, one inch to the right of left scapula (inferior angle.) The wound was four inches deep, directly inwards. I probed with my finger as the wound was large enough to admit my index finger easily. He had also a cut on the left arm from the joint of the shoulder to within one and a half inches of the elbow; this wound just penetrated through the true skin, exposing the muscles.

The patient was suffering greatly from shock; pulse very weak and rapid; beads of cold, clammy sweat standing out on forehead and chest. I administered free doses of spts. am. aromat.; to rally him from the shock, and ordered cold water applied every fifteen minutes, and the patient to be kept in a sitting posture until my return the next day. June 16th, I found patient comfortable with the exception of sharp pains on drawing a long breath; he had completely recovered from the shock. Pulse 78; temp. 98°; some little oozing from the

wound. Continued the cold water dressing, and ordered one grain of gum opium every four hours. He was kept in the sitting posture until next day. June 16th, patient was feeling somewhat easier, spitting a little blood for the first time. Pulse 110, temp. 100°. Continued the opium and gave tr. digitalis gtts. viii. tr. verat, viride gtts. iii, every two hours to allay the inflammation which was taking place. The next day I found him lying in bed feeling very comfortable; no pain, but still expectorating a little dark colored blood. Wounds granulating nicely. Continued the digitalis and veratrum, but stopped the opium. Pulse 84, temp. 99°. Next day found him walking around the room, whistling. The liquid was continued but not so often; the wound in the back had healed to one half its size; the one on the arm almost completely healed up. Pulse 94, temp. 100°. Five days later found him in good condition, wounds healed up; Temperature and pulse normal. I discharged him as cured. I have never seen him since, but heard he had walked three miles to church several times.

C. B. GALE, M. D.

Newport, O., July 31st, 1884.

Ko-Ko Tolu and Diarrhœa.

Editor "Medical Chronicle."

In the month of May I was consulted by my mother in reference to the condition my nephew, James B., aged 3, who was suffering with diarrhœa. On examination I learned he had had a chill the day previous, and at the time complained of pain in the sternal region; his temperature was 100. The prevalence of measles and whooping-cough in his neighborhood made me hesitate about making a positive diagnosis. But knowing that he had suffered with no premonitory symptoms, and was an unusually healthy child, and considering that the diarrhœa had existed 24 hours previous to the paroxysm, and also remembering to have seen him swallow a piece of ko-ko tolu, I came to the conclusion the boy was suffering with malarial fever; and that the diarrhœa was owing solely to mechanical irritation of the intestinal tract, caused by the presence of the insoluble portion of tolu gum. The stools of the patient were examined and one passed in my presence contained grs. xxx of a tough substance recognized as the remains of gum. Although rational treatment had been instituted for the bowel affection in vain before, the child was not relieved until the insoluble gum had passed and its future use was prohibited, when it readily yielded to treatment. I am under the impression that in large cities where so much chewing gum is used the etiology of existing diarrhœas might often be found to depend on this habit.

ROBT. WHITE BARTON, M .D.

Memphis, Tenn., July 12, 1884.

Injury to Spinal Cord.

Editor "Medical Chronicle."

I was delighted to read in your May issue an article from my friend Mulhane, who it seems is battling very successfully with the diseases and accidents to which poor humanity is liable. While reading the doctor's very well reported account of his experience, the thought occurred to me that the following might be interesting to him and many others of our old class "chums:"

January 3rd last, Mrs. A., aged 68 years, had the misfortune to be thrown from a cutter, off a bridge, a distance of about twenty feet, striking upon frozen ground. She was carried into a house and the writer sent for. On inquiry, I found that while being carried in, she complained of her feet being tangled or tied together. This at once aroused my suspicion, and upon examination I found a complete hemiplegia existed from about the fourth dorsal vertebra. There was not the least particle of feeling, nor was there the slightest power to move a muscle. I could

find no discoloration, and the injury to all appearance seemed to be one of concussion at the point named.

There was considerable excitement and some delirium, which was quieted with morphia. The only external or visible injury was a cut, perhaps an inch in length in the centre of the forehead, which I dressed with adhesive strips. I visited the patient twice a day while she lived. Very gentle stimulation was administered, of whiskey in milk. The bowels responded to a good mercurial cathartic, but as the bladder was involved, I was obliged to use the catheter every twelve hours. The secretion was at first scanty and afterwards copious.

On the evening of the fourth day the patient lay perfectly unconscious, and breathing in a gasping "chin drop" manner, and only about six times per minute, while the pulse was one hundred and thirty.

The patient gradually sank away, took scarcely any nourishment and finally died quietly on the tenth day following the accident.

C. B. TRAFFORD, M. D.

Upper Lisle, N. Y., May 29, 1884.

ANALECTS.

Pneumonia.

The collective investigation committee of Great Britain has undertaken to furnish the profession with such views as it can ascertain from observers relative to pneumonia ; and the subject was very ably introduced by Dr. J. Burney Yeo for discussion before the Birmingham and Midland Counties Branches of the British Medical Association. (British Medical Journal, June 28, 1884.) After describing at length the micrococcus of pneumonia, as discovered by Friedlander and verified by Emmerich and others, he details at length certain records which tend to strengthen the theory of its communicability from one person to another. He says: "I should like to call your attention to a few of what appears to me to be the most instructive instances on record of the supposed epidemic occurrence of pneumonia, and its supposed propagation by contagion. And I will first refer to an account, given by Stokes, of an outbreak of what he terms asthenic pneumonia, in Dublin, the cases presenting so marked a typhoid character that he was evidently doubtful whether he was right in calling them cases of pneumonia, though the early occurrence of pulmonary consolidation was undoubted ; but the clinical thermometer had not then come into use, and he was without that means of diagnosis. He says: 'The occurrence of this disease, as affecting great numbers in a particular locality, was observed in this city some years since. The persons attacked were young and healthy men, privates in the constabulary force, who were quartered in the then newly erected barracks in the Phœnix Park; these young men were well fed and clothed, and might be considered as possessing the greatest strength and vigor. It is a remarkable circumstance that at the time of the appearance of this disease, many cases of another and extraordinary affection were observed in the poor-houses and hospitals in and near Dublin. I allude to cerebral spinal arachnitis, and it is important to mention that several cases of this disease occured in the force contemporaneously with those of pneumonia The general characters of the pneumonia were suddenness of invasion, and great rapidity of progress, the lung rapidly passing into hepatization. (Stokes on diseases of the chest. Sydenham Society's edition, p. 303.)'

"Another interesting account of an epidemic of pneumonia is given by Surgeon-Major Costello, of the Bengal Medical Department. On joining the 1st Punjab Infantry, at the end of March, 1875, he found a state of alarm there, on account of the number of deaths that had taken place from pneumonia, at a time, too,

when the temperature was warm and equable. The regiment had lost from 30 to 40 men, out of 550, in a few weeks. It was almost confined to two companies; and, when it appeared amongst the married, it spread to different members of the family; and, when cases were taken into hospital, it spread to other patients ill of other diseases, and to the nurses and attendants. There was always a catching pain in the side, and the infiltration spread rapidly through the lungs, and was attended with 'typhoid' symptoms. Removal from barracks to tents, isolation of affected persons and their attendants, immediately arrested the progress of the disease. The Third Punjab Infantry lost 60 men from a similar outbreak. He believed it was caused by marching through districts known to be affected with bovine pleuro-pneumonia. (Lancet, January 29, 1881.)

"But to come nearer home; a very remarkable series of cases, pointing to direct contagion, have been recorded by Mr. Patchett, of Shaw, near Oldham, (Lancet, February 25, 1882). A whole family of five persons died, one after the other, in less than a fortnight, of typical and uncomplicated pneumonia. Four brothers and a sister, all unmarried, lived together on a farm, where they had resided all their lives, which was well and healthfully situated on a steep hill-side, and was in excellent sanitary condition. There was no suspicion of septic influence. The previous health of all the family had been exceptionally good.

The first case seen was on January 13th, 1876, the eldest brother, aged 73; he died on the 16th, after an illness of six days with pneumonia of the right lung. The day of his death, another brother, aged 66, was found also to have right-sided pneumonia, which extended to the left lung; and he died in three days, on the 19th. On the morning of January 20th, a third brother, aged 63, who was quite well and at work the day before, was found with signs of pneumonia at both bases. On the evening of the same day, a fourth brother, aged 64, felt shivery and cold on going to bed; next morning he had double pneumonia, and both died on the evening of the 22d. The sister, aged 61, who had been in attendance on all the brothers, and appeared to keep her health and strength remarkably well, was seized on the 23d with right pneumonia, and died on the 26th.

"This is, surely, a very remarkable record; but there is another, scarcely less so, by Dr. F. H. Daly, of Hackney Downs, (Lancet, November 12th, 1881).

"In October, 1879, there occurred in the same house, and within a few days, four undoubted cases of pneumonia; and these followed an illness in another child, who had not been previously examined by Dr. Daly, but who was now found to show signs of recent lung consolidation; so that there were five members of this family, four children and the mother, who nursed them. The mother died, and the grandmother, a healthy woman, 60 years of age, who came to nurse her daughter, fell ill of pneumonia, and also died. There was no question here of unsanitary conditions —no overcrowding, or bad ventilation, or bad drains; there had been no chill, and no prolonged exposure. The husband and three servants, who were but little in the sick-room, escaped. 'My cases,' Dr. Daly remarks, "exactly resembled, in their mode of attack, case following case, and progress, some zymotic disease, contagion from one patient to another.'"— *Weekly Medical Review.*

On the use of Opium as an aid to Surgery.

Mr. Geo. Pollock says it is in the various conditions of gangrene that opium may be said to stand alone as useful and powerful for good, whether the gangrene be the result of injury in old age, or whether it be in an

ulcer in advanced life, kept open by neglect and exposure. In cases of gangrenous ulcers, opium administered internally arrests or modifies any tendency to ulceration and sloughing, soothes pain, and husbands the powers of the patient. In senile gangrene, Mr. Pollock knows nothing, as regards medical treatment, which can compare with the internal use of opium. It alone will mitigate the pain and render life tolerable till the line of demarcation appears. In such cases opium may be so used freely. In traumatic spreading gangrene, opium is of no use; neither is it of any service in gangrene attendant on diabetes, or due to embolism. In various forms of phagedena, Mr. Pollock has seen the most satisfactory results follow the free use of opium. In such cases opium is not generally appreciated as it deserves to be, more dependence being placed on local than general treatment. Mr. Pollock has never once in his large experience had recourse to nitric acid in cases of sloughing phagedena and sloughing sores, nor has he ever found the use of opium to fail in such cases. In all cases of syphilitic phagedena in private and hospital practice he has trusted alone to the internal use of opium, and has never been disappointed. In ulceration and sloughing of the mouth in young children, Mr. Pollock has found 3 minum doses of laudanum administered every four hours till drowsy, then omit while the drowsiness lasts, and continue after it ceases, of the greatest benefit; these cases getting well without any other treatment.

Of the use of opium after hernia operations, and in cancer, little need be said in praise. In cancer, it not only gives relief to pain, but renders life tolerable. The tolerance of opium in many cases is remarkable, the quantity being only measured by its quieting effects. In administering opium, constipation is a thing to be guarded against. Sir Benj. Brodie used to prescribe calomel occasionally when the continued use of opium was requisite. It will be sometimes necessary to relieve the rectum by enemata, and even occasionally to break down hard accumulations of feculent matter. Not unfrequently opium disagrees in certain individuals; In one it may be the quantity, in the other the quality, of the ingredient. Some cannot take solid opium, whilst Battley's solution agrees well. In others Battley's fails, but codeia can be tolerated, especially as a sedative in bladder trouble complicated with enlarged prostate.

I have this winter had under my care a case of senile gangrene which fully confirms what Mr. Pollock says. First one foot became affected, and full doses of opium were given, the line of demarcation formed, and gangrenous part removed; then the other foot became excessively painful, and soon after became gangrenous, and after some time a line of demarcation formed, and this foot was removed. During all this time the patient was treated with full doses of solid opium to relieve pain, and eight ounces of whiskey daily to sustain strength. Without this treatment he would have succumbed to exhaustion; now he is in a fair way to recovery, having been supported by opium until the crisis had passed. —*Western Lancet.*

The Best Time for Administering Medicines?

Before or after meals? Such is the question often asked of the doctor, but the answer is not always ready. The *Midland Medical Miscellany* answers it as follows: Medicines that are irritating should be given after meals, when the stomach is full, viz: the salts of copper, zinc, iron and arsenic in large doses. Small doses, intended to act on the stomach terminals of the vagi, must be given when the organ is empty. Chemical reasons also have their influence, thus, oxide and nitrate of silver, intended for local action, should appear in the

stomach during its period of inactivity, lest, at other times, chemical reactions destroy the special attributes for which these remedies are prescribed. Iodine and the iodides further illustrate this point. Given on an empty stomach they promptly diffuse into the blood, but if digestion is going on, the acids and starch form products of inferior activity, and thus the purpose which they are intended to subserve is defeated. Substances prescribed to have alvine action on the mucous membrane, or for prompt diffusion unaltered, are preferably given before meals. The condition of the stomach veins after meals is such as to lessen the activity of diffusion of poisons, and hinders their passage through the liver. It follows that active medicaments in doses near the danger-line, are more safely administered after meals.

When shall acids and alkalies be given, before or after meals? First, as to acids. When acids are prescribed with the view to check the excessive formation of the acids of the gastric juice, they may be given before meals—as, by the laws of osmosis, they will determine the glandular flow of the alkaline constituents of the blood. The same reasoning would hold good when the alkaline condition of the blood is in excess; osmosis being favored, the acid would reach the blood more readily. Second, as to alkalies. These may be given just before meals, when the acid-forming materials in the blood diffuse into the stomach glands, and after digestion is completed, when the alkalies diffuse directly into the blood, without interference from the contents of the stomach. An alkali taken during the time when the reaction of the stomach juices should be strongly acid, must necessarily hinder, if not arrest, the digestive process for the time being. The metallic salts—notably corrosive sublimate, alcohol, tannin, and some other agents—impair or destroy the ferment, or digestive power, pepsin. Wine that is intended to act as food, is most beneficial when taken slowly during the course of the meal. The objection as regards the ill effect of alcohol on pepsin, is not applicable here except to the stronger spirituous wines in large quantities, for the ordinary medicinal wines do not have sufficient alcoholic strength to injure this ferment. Iron, phosphates, cod liver oil, malt, and similar agents should, as a rule, go with food through the digestive process, and with the products of digestion enter the blood.—*American Medical Digest.*

Bright's Disease of Malarial Origin.

In an exhaustive paper upon the above subject, Dr. I. E. Atkinson, Professor of Pathology in the University of Maryland, arrives at the following conclusions:

1.—Transitory albuminuria is not uncommon in the course of malarial fevers, and is due to the intense visceral congestions characteristic of these affections. It only may endure throughout the height of the congestion, recurring with each return of this, or it may persist in the intervals, in which event a higher grade of congestion is attained, more nearly approaching a condition of acute inflammation.

2.—In a proportion of cases, varying with locality and type of prevailing epidemic, or individual conditions, inflammation of the kidney occurs, accompanied by dropsy and the usual symptoms of nephritis.

3.—The usual form of malarial nephritis is the tubal and diffuse variety. In this the inflammation seems to be most intense in the vicinity of the glomeruli.

4.—Contracted kidney may occur as an advanced stage of malarial nephritis either from long-continued or frequently repeated attacks of malarial fever, or from fibrotic changes such as may ultimately occur in ordinary tubal or diffuse nephritis. It is altogether improbable that this form of malarial renal disease ever occurs

primarily as purely interstitial nephritis.

5.—These changes may be induced by any form of malarial fever though they more commonly follow chronic intermittent fever.

6.—The tendency of malarial inflammation of the kidney is toward recovery. Bnt from the persistence of the impaludism or the intensity of the inflammation, structural changes may be produced that are characteristic of chronic Bright's disease, when the gravity of the affection will be as that from chronic Bright's disease from whatever cause.

7.—Treatment should be directed primarily against the malarial intoxication, more especially in recent cases. A correction of this will often be followed by a complete, though often gradual, subsidence of the nephritis. Even in more chronic cases the malarial factor in the process should definitely be destroyed if possible, after which the disease should be treated as ordinary Bright's disease.

The Employment of Hydrastis Canadensis in Gynecology.

Dr. Schatz, of Rostock (*Medical Summary*) is of opinion that the medical treatment of the diseases of the female sexual organs has been crowded too far into the background by the operative treatment; that nowadays the knife is not rarely resorted to in cases in which favorable curative results could be attained by less formidable measures. The author thinks that, especially in functional disturbances of the uterus and ovaries, in menstrual anomalies, direct or reflex nervous, even congestive troubles, medicinal treatment ought to be tried if the difficulties are but moderate, if an operation is dangerous or mutilating. He calls attention to the fact that often accidental changes in the mode of life, of the climate, physical alterations, nervous irritations, and finally medication prescribed for other purposes, are followed by obvious and unexpected changes in the affections named.

With this view S. experimented with hydrastis canadensis in menstrual disturbances. He used the fluid extract in about fifty cases. Two-thirds of these can be utilized in estimating the value of the drug. In general it seems to act on the mucous membranes by exciting their vessels to contract. In the female genital apparatus, it seems not only to diminish the blood supply of the mucous membranes, but to act on them as a whole. It is remarkable that the remedy is often effective in cases in which ergot has failed or even has rendered the symptoms worse.

Favorable results were obtained by S. mainly in metrorrhagias due to myomata (ergot had long been used in vain), hemorrhages in the puerperium, in menorrhagias of young persons from fifteen to eighteen years of age, finally also in those forms of endometritis in which curetting had failed. In most cases, he commenced the use of the drug one week before the onset of the menses; where the catamenia recurred with undue frequency, even longer previous to the normal date of their appearance. In several cases the flow not only became less profuse and shorter in duration, but several times it failed to set in altogether. In the case of myomata, too, the hemorrhages disappeared often for months. The incidental effects of the drugs generally were only agreeable in their nature. Particularly noticeable was an increased appetite. Once only a certain lassitude occurred; in another case, states of exaltation. The dose of the fluid extract is about twenty drops three times a day.

Cysts in Bone Tissue.

The *Brit. Med. Jour.*, May 3, 1884, says: PROFESSOR BILLROTH has never observed cysts in the cortical layer or compact tissue of bone, but always in the spongy tissue. According to Professor Billroth, the development of these cysts observes two processes which are sometimes combined. The bony and medullary tis-

sue may undergo degeneration and break down, whether it be the spongy tissue or sarcomatous tissue that is degenerated; or, as is easily conceived, a cyst can form by expansion of the bone-tissue provoked by an accumulation of fluid which, submitted to the influence of considerable pressure, exudes, and pushes, from inwards outwards, the different osseous layers. The development of the articular cavities, of the antrum of Highmore, and of the frontal sinuses, may be considered as a typical example of the early formation of cystic cavities in bone-tissue. Articular cavities are formed by the breaking down of a pre-existing dense cartilaginous tissue. Cysts are often thus developed in osteo-sarcoma present in the medullary canal. Professor Billroth regards dental cysts of the superior maxillary, formerly described as dropsy of the antrum of Highmore, as the prototype of tumors of this kind. Formerly Billroth believed these cysts to be formed by the breaking down of a sarcomatous tissue. At the present time he believes they develop in the spongy tissue above the roots of the teeth; the areolæ are distended by the fluid, and eventually merge together. An abundance of fluid is secreted in the medullary lacunæ of the inner surface of the bone, and exercises so strong a pressure that the superficial layers of bone-tissue are pressed outwards. Hydatid bone-cysts prove that bone-tissue becomes distended when submitted to the influence of an expanding fluid. It is also probable that the cysts which are formed by the breaking down of pre-existent tissue, are completed by their walls becoming distended, an exudation of fluid taking place.—*Quarterly Compendium.*

Sacrache and Back-Ache.

In the course of some interesting lectures by Dr. J. Mathews Duncan, in the *London Medical Times*, we note the following, which is possessed of practical interest:

There is no more common, and therefore no more important, symptom of uterine disease, and especially of disease of the neck of the womb, than sacrache. The pain is dull, or an ache rather than pain; it is situated at or near the base of the sacrum; and, referring to it, patient puts her hand to the part. I say with emphasis "at or near," and it is desirable to make this more definite. A pain below the middle of the sacrum is not at or near, and a pain above the middle of the lumbar spine is not "at or near." Such pains and aches do not point to the womb, as the characteristic sacrache does; but the characteristic sacrache only points in that direction; it is not in itself nearly sufficient, not even strong, evidence of disease of the womb. Occurring in a virgin it would not, alone, unless very severe and inveterate, lead you to make an actual examination of the womb.

Other back-aches, that is, pains in other regions of the back, not the sacrache, may accompany uterine disease but do not point to the womb, are not symptoms rationally held as indicating womb disease. Unfortunately women are, at present, so under the influence of bad medical instruction, that they regard all pains in the back, from the occiput to the coccyx, as nearly sure indications of uterine mischief, and demanding uterine treatment.

The sacrache or womb disease may be constant, but generally it comes and goes. Frequently it is dispelled by lying, it is felt on going to bed, and has disappeared before morning, and long standing makes it reach its highest pitch. When it is otherwise, that is when the ache is worse in the morning before getting out of bed, or is relieved by walking, then it is certainly not uterine.

I have said that you must not regard all sacraches or other back aches as uterine. They are common in men and women. A weakly woman, who attends to all her pains, can do

no standing or walking without back ache, and often it is a sacrache; especially if she has a long back, will she suffer in this way.

The pains liable to be confused with real sacrache are all in the lower back, about the lumbar spine; it is only such that might mislead any rational physician. Regarding them you will get some light from noticing the causes of the same pains in men. Now I find that weakly men are liable to these aches, sacral or lumbar, on walking or standing; and in many they are produced by excessive venereal indulgence.—*Medical and Surgical Reportor.*

Diseases Produced by Drinking Water Flowing from a Graveyard.

The following cases present some points I think worthy of serious consideration:

H., age 13, female, of previous good health, while at work in a field on October 1st, 1883, just before taking her dinner drank water from a branch which had its origin from the side of a hill that had long been used as a burying-ground.

The place at which she drank the water was about one hundred and fifty yards from the source of the branch. About an hour after she had taken the water she complained of being sick, suffered pain in head and very soon began to vomit, and continued until midnight, when a diarrhœa set up, from which she suffered greatly, complaining of aching all over, which continued for three days, when I was sent for to see her.

I found her with pulse 112, temperature 103° F., suffering intense pain in left hip and leg, tenderness on pressure over sciatic nerve on same side; some swelling of the hip.

I gave patient hypodermic injection of morphine, which gave some relief. The morphine had to be continued at intervals to produce rest.

On the third day after I saw her, her mother called my attention to a swelling of the labum majus of the left side. This very soon resulted in a large abscess which discharged profusely. A few days after this she complained of pain in the knee, wrist and clavicular articulations. These showed very little sign of inflammation at first, but in a few days suppurated. The parotid glands also suppurated. Patient died on the eighteenth day. The temperature and pulse varied very little from what they were when I first saw her. She was given quinine and iodine, and was kept on as nutritious a diet as could be had, consisting of beef, eggs, etc.

There was a sister who drank water at the same time and place who was sick in the same manner, who had a similar abscess on the scalp to the ones related. This patient recovered.

A year previous to this time an older sister, after drinking at this same place, was taken sick in a few hours and had a long and severe spell of typhoid fever; she had no abscesses as did the others.

The owner of the land through which this branch flows, informs me that whenever he has permitted his stock to pasture in this field they lose their appetite, fail to eat and very soon get poor. He, knowing the bad effects of this water on his stock, had cautioned his children against drinking it.

Did the drinking of this water produce these diseases? If so, why should two of the cases, seemingly have pyemia and the other typhoid fever?—*Altanta M. and S. Journal.*

Does Pleuritic Effusion Always Require Tapping?

Dr. W. H. Broadbent, in some interesting clinical lectures, reported in the *London Lancet* of May 24 and 31, gives some valuable views on this subject. For the sake of brevity, we have thrown some of his remarks into propositions.

He would make, clinically, two subdivisions of pleurisy with effusion, excluding those cases of hydrothorax

and of effusion secondary to heart or kidney disease, to anemia, cancer or tubercle of lung, or pleura, or to abdominal trouble.

1st. Those cases presenting the signs of *uncomplicated* pleuritic effusions.

2d. Those presenting, in addition to these, *generally diffused* tubular breathing and sometimes ægophonic vocal resonance.

In the first class of cases, the elasticity of the lung being preserved, it shrinks before the accumulating fluid, the bronchial tubes collapse, and the usual signs of simple effusion are made out.

In the second, there is associated consolidation of the lung. The lung does not shrink, owing to impaired elasticity, and immersed, as it were, in the fluid, is everywhere near the chest-wall. The solid lung prevents collapse of the bronchial tubes, and the bronchial sound is readily transmitted to the ear through the surrounding thin layer of fluid.

In the first class of cases, tapping is called for; in the second, he thinks it better not to tap, because,

1st. The amount of fluid to be absorbed is really less than the extent of the dullness would indicate, and the withdrawal of the fluid not being so quickly followed by expansion, the relief of symptoms will not be so great as in uncomplicated effusion.

2d. The tapping affects little the condition of the lung, which is probably the primary trouble.

3d. Aspiration *might* set up mischief, resulting in empyema.

4th. Experience has shown that absorption in these cases is often rapid.

To summarize:—

1st. *As a rule*, he would not tap until the cavity is full.

2d. Urgent symptoms would demand it sooner. *Dyspnœa is imperative.* Impediment to the heart's action from pressure, disease of the heart, kidney trouble, bronchitis or disease of the *opposite* lung, might at any time call for it.

3d. Owing to diminished elasticity, old persons would stand less accumulation of fluid, and require tapping earlier.

4th. When *diffused* tubular breathing is heard, indicating solidified lung, he would delay, even after the cavity was apparently full, until urgent symptoms demanded interference, for reasons given above.

5th. If a phthisical lung is compressed, it might be well to delay; but if, one lung being phthisical, the other, a healthy one, be compressed, he would recommend tapping early. —*N. O. Med. and Surg. Journal.*

On Opening and Draining of Abscess Cavities in the Brain.

The antiseptic method of operating and after-treatment has not as yet been fully tested in operations upon the brain. This is natural, for not only have we inherited a just dread of dealing with an organ the large majority of whose diseases are dangerous or fatal, but, our knowledge of the physiological functions of the brain and their pathological modifications being extremely limited, we are not in a position to form such an accurate diagnosis as calls for surgical interference. Drs. Christian Fenger and E. W. Lee, of Chicago, in an extremely interesting paper on this subject in the July number of the American Journal of Medical Sciences, consider the treatment of traumatic cerebral abscess, and report a case which was successfully treated by opening and drainage.

Bergman, in discussing the treatment of cerebral abscess, unhesitatingly sets it down as an axiom that wherever there is an accumulation of pus, trephining is most clearly and indubitably indicated, for the opening of an abscess in the brain is as necessary as in any other part of the body, and we would add, even more so. A correct diagnosis of abscess having been made, the further difficulty presents itself of locating it with sufficient accuracy, so as to be able to

find it. A number of cases are on record, in which a correct diagnosis had been made, the trephine also put on more or less at the right place, but the knife or trocar being passed into the brain, it nevertheless missed the abscess. Drs. Fenger and Lee show by their case, that this difficulty can be obviated by multiple exploratory aspirations, performed at interstices sufficiently small to prevent any abscess from escaping detection, even if the trephine opening should not have been made at the point of the skull nearest the abscess.

There are on record a large number of cases of cerebral abscess, in which trephining was performed, pus evacuated, and temporary relief obtained; but later relapse followed, and a fatal termination ensued. It is possible, judging from the success the practice has met with in the treatment of abscesses in other situations, that drainage of the cerebral abscess-cavity, with or without washing out, would have saved some of these cases, by preventing the reaccumulation of pus and continuous infection of the surrounding brain tissue, the acute edema of which is well known to be, as a rule, the final cause of death. As far as Drs. Fenger and Lee are aware, draining and washing out of cerebral abscess cavities has heretofore never been tried; that it can be effected and without any detriment to the patient, is shown by their case, the treatment of which they hold strictly conforms to the rational methods of modern surgery in treating abscesses in general; and because of this, and not because their patient recovered, they regard the case as answering affirmatively the question: Is it probable that abscesses in the brain can be treated advantageously on the same principles as abscess in other parts of the body?—*Weekly Med. Review.*

THE ribbon of the Legion of Honor has been conferred on Dr. Koch, by the French Government.

Substitution of the Sodium Iodide for the Potassium Iodide.

Dr. Berg (*Archives of Medicine*, April, 1884) enters a plea in behalf of the sodium iodide in lieu of its potassic congener. Both from theoretical considerations and practical experience, he urges the substitution of the sodium for the potassium salt. He makes the folowing claims for the iodide of sodium: 1. It can be used therapeutically for almost all, certainly the chief purposes for which potassium iodide is used, and he believes, with similar beneficial effects. 2. Sodium iodide is more assimilable than the iodide of potash, both locally to the digestive organs and the general system. 3. Many of the local and general undesirable effects which are produced by the potassium iodide do not follow the use of the sodium iodide. He concludes by saying that it is to be hoped, therefore, that the sodium iodide will be used by those whose clinical advantages admit of an extensive trial of the drug, so that a more extended experience may confirm that which a limited experience would seem to claim for this drug.—*Columbus Med. Journal.*

Primary Union of Tissues Divided by the Thermo-Cautery.

The following conclusions, based upon a large number of obsevations, are formulated by Dr. Reclus: 1. Tissues divided by the thermo-cautery may unite by first intention. 2. In order that this result may be obtained, the eschar formed by the cautery should not be very thick. 3. It is necessary to guard the wound against all septic infection. The occurrence of primary union is explained by the fact that the charred tissue is very light and is easily penetrated by the new vessels. The embryonal cells at either border insinuate themselves between the carbonized particles, meet and anastomose, and union takes place. The adoption of antiseptic precaution is, however, essential.—*N. Y. Med. Record.*

Hepatica.

Messrs. J. U. & C. G. Lloyd, of Cincinnati, have been investigating the subject of Liver-leaf, and have found much that is new and interesting in connection with the commercial and botanical history of this drug. Of late years this drug has been extensively consumed in the preparation of certain proprietary medicines. From statistics collected by Messrs. Lloyd, it appears that last year over 340,000 pounds were consumed, of which amount over 300,000 pounds were imported from Europe. Four years ago the entire consumption did not reach 10,000 pounds. In this country we have two species that produce the drug. In most medical works, and in old botanical works, the plants were classified as Hepatica; but late botanical authorities include them in the genus Anemone, on account of the structure of the flower. The exceedingly dissimilar properties of these plants from Anemone, would seem to indicate the doubtful propriety of placing them with that genus, and the name Hepatica, which will always be the medical name for the drug, will propably also be the final botanical name. Our native species are now named Anemone Acutiloba and Anemone Hepatica, and very closely resemble each other except in the shape of the leaves; the former has sharp lobes to the leaves; the latter, blunt lobes.

Our Pharmacopœia has recognized but one species—the round-lobed form. It is proven, however, by Messrs. Lloyd, that nine-tenths of the native drug of commerce is collected from the sharp-lobed species, which has never been officially recognized. The medical properties of Hepatica are unimportant. The plant does not contain an active principle, and is as devoid of characteristics as is the grass of the field. Of the vast amount of the drug consumed, it is creditable that the medical profession uses but a small per cent. Almost the entire lot is employed in the preperation of certain secret remedies.

The foregoing has been compiled from the July number of "Drugs and Medicines of North America," noticed in the last number of THE CHRONICLE, which, in addition to full botanical and medical descriptions of the drug, contains a full-size plate of the plant, illustrating the shapes of the different leaves of commerce, and a map showing the distribution of our two native species.

Chronic Tonsillitis and Tonsillotomy.

The London *Medical Times* of March 8 contains a brief but pointed paper condemning the wholesale removal of tonsils for chronic inflammation. The disease is peculiar to certain individuals, usually those of a strumous type. In many cases other lymphatic enlargements coexist. The cause of the fluctuation in size in the same person, and of the regrowth after removal, is to be looked for in the anatomy of the organ. It is made up entirely of lymphatic and adenoid tissue. The symptoms produced are: the peculiar expression of the face, the noisy breathing at night, occasional deafness, and less frequently abdominal pain and capricious appetite. So long as deglutition and respiration are not interfered with, the size of the tonsils is usually a matter of little importance. A strong tendency to atrophy, as age advances, exists. When tendency to hypertrophy is still present, it is almost certain to show itself after ablation. The general, not the local, condition should be aimed at as the object of treatment. In most cases it is found that cod-liver oil and iron will do as good work before as after operation. Except for the one cause of local obstruction, there is no more reason for removing hypertrophied tonsils than any other enlarged lymphatic glands.—*Arch. of Pediatrics.*

The Medical Chronicle.

A Monthly Journal for the Practitioner.

GEORGE H. ROHÉ, M. D., Editor.

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DR. GEORGE H. ROHÉ,
Cor. Greene & Mulberry Sts., - Balto., Md.

BALTIMORE, SEPTEMBER, 1884.

EDITORIAL.

The Gospel of Feeding.

In a remarkable paper recently read before the Boston Society for Medical Improvement,* Dr. Richard M. Hodges, discusses a number of dietetic delusions and their deleterious effects upon the human organism. Considering first the standard diet tables established by experimental physiologists, Dr. Hodges calls attention to the frequency with which physicians are consulted in reference to cases, whose symptoms are entirely due to insufficient alimentation. He says: "The underfed constitute so considerable a class, that a large part of medical practice is devoted to attempts at satisfying their unfortunate demands for something which shall make them feel better. The futile use of iron, quinine, bitters, elixirs and other so-called 'tonics,' either when self prescribed or methodically directed by physicians, and the insuccess of medicines, as a rule, to relieve the wearisome complaints daily listened to from persons whose mode of living is an injustice to themselves, do not always serve as a reminder that suitable nutriment, in some form or other, is the only real 'tonic,' and that its methodical consumption can alone relieve the protean afflictions of many, if not most of these querulous supplicants. To say to them in a vague and general way that a nourishing diet should be taken, and that anxiety and overwork are to be avoided, is to give weak advice. The most rigid and literal obedience to fixed and precise rules in regard to the quantity and character of the food and the time of taking it—in fact, the carrying out of a process of 'stuffing' practiced at short intervals of time, without regard to appetite and pushed to the stomach's maximum capacity of digestion—is necessary to extricate them from their deplorable situation."

The practice so generally condemned, of eating shortly before going to bed, is regarded by Dr. Hodges as, on the whole, beneficial rather than otherwise. "If the ordinary hour of the evening meal," he says, "is six or seven o'clock, and of the first morning meal seven or eight o'clock, an interval of twelve hours, or more, elapses without food, and for persons whose nutrition is at fault, this is altogether too long a period for fasting. That such an interval without food is permitted explains many a restless night, and much of the head and back ache, and the languid, half-rested condition on rising, which is accompanied by no appetite for breakfast. This meal itself often dissipates these sensations. It is, therefore, desirable, if not essential, when nutriment is to be crowded, that the last thing before going to bed should be the taking of food."

Soups come in for a share of condemnation, which we think, is only partially deserved, as its justice depends upon the manner in which the soup is made. The author of the paper says that soups are, as a rule, "but some form of meat tea, and are known to have a food value not unlike that which urine would possess, were it drank, and which they resemble chemically."

On the other hand, Dr. Hodges asserts that the "calumniated and

*Boston "Med. and Surg. Journal," July 10, 1884.

much libeled sausage is, in winter time, one of the most useful and successful articles for frequent feeding." He advises it to be taken cold.

Raw eggs are commended as useful, nutritious and easily digestible articles of food. But, "beaten-up-eggs are the certain provocative of dyspepsia. When subjected to this process with the infinite pains-taking of an attentive friend or nurse an inviting draught of creamy froth is brought to the unfortunate recipient, a tumbler full of air, which has been introduced in the largest possible amount to a given quantity of egg, milk, wine, sugar and nutmeg,—than which nothing could be devised to better promote indigestion, abominable eructations, and the most uncomfortable flatulence or acidity."

Of milk, Dr Hodges says that it "is often too poor, but never too rich, for purposes of enforced nutrition and the fact is incontrovertible that it is the model food for digestibility."

It is an encouraging sign when medical men of the scientific standing of Flint, Weir Mitchell, Hammond and Dr. Hodges insist upon the necessity of more liberal feeding, both in health and disease. We have often heard young women—no, we mean young *ladies* decline to eat meat, because it rendered the skin "gross," and yet this class most frequently suffer from disfiguring skin diseases, which good feeding alone will not rarely cure. An attractive picture of a well-fed young woman is drawn by Dr. Hammond in his recently published novel. He is speaking of Theodora, the extraordinary daughter of the eccentric Dr. Willis, and comments as follows: "There is no better test of a woman's health than her ability to eat a hearty breakfast, and it might almost be said that her physical beauty is in direct proportion to the amount of beefsteak or mutton chops she can put into herself at this meal. Certainly, pretty women can always eat a hearty meal."

New Englanders especially, owe a debt of gratitude to Drs. Flint, Hodges and Hammond, for preaching the gospel of food so effectively, for nowwhere throughout the country have dietetic delusions taken so strong a popular hold, or done so much harm to the physical organization of men and women as in the Northern and Eastern States.

The Coming Sanitary Council of Maryland.

The second popular Sanitary Council, of Maryland, called under the auspices of the State Board of Health, will meet at the Blue Mountain House, on the Western Maryland Railroad, on September 17, 18, and 19, 1884. Prominent citizens from all parts of the State have signified their intention to be present, and many valuable papers are expected. The subjects, which will especially engage the attention of the council are the following:

The Adulterations of Food and Medicines; the Pollution of the water courses in Maryland; the Relation of the Diseases of Animals to the Human Race; the Sanitary Problems of the Cities and Towns of Maryland; the Relation of the Press to Sanitary Work; the Relation of Teachers to Sanitary Work; the Physical Dangers of Alcoholic Beverages; the Relation of the Clergy to Sanitary Work; the Duty of State and Municipal Governments in connection with the Public Health; the Disposal of the Dead, etc.

The Secretary of the State Board of Health, Dr. Chaneellor, has secured reduced rates on the railroad lines in the State, and also at the hotel above named, to all persons attending the council.

The profession of the State should be present in large numbers to encourage the State Board of Health in this laudable endeavor to bring the subjects of Public Health directly home to the people.

The Autocrat's Seventy-fifth Birthday .

"I took my first draught of that fatal mixture called atmospheric air, on the 29th of August, 1809," says Dr. Oliver Wendell Holmes, in a note to the editor of the *Critic*, a N. Y. literary journal. The number of the *Critic* for August 30th, is devoted to a batch of congratulatory letters to the distinguished poet, wit, philosopher and physician, from his literary brethren. We quote the following appreciative lines from the sonnet of Charles De Kay :

"Wherever men the laws of healing teach,
Your name is honored and your theses read;
Wherever sounds our great colonial speech
From lightened hearts fall blessings on
your head;
Ay, by your art, O healer rare, you reach
Past your own life and aid the future's
dead."

CURRENT LITERATURE.

Memoir on the Nature of Diphtheria. By Drs. H. C. Wood and H. F. Formad. Appendix A, Report of the National Board of Health for 1882.

This paper gives the results of probably the most thorough research in experimental pathology ever carried out in this country. The most important points established by the authors are as follows :

The poison of diphtheria is solid and particulate. Micrococci are an essential part of the diphtheritic process, being always found locally at the seat of inflammation, and, when blood-poisoning develops, also in the blood, attacking and destroying the white blood corpuscles, forming emboli in the kidneys, spleen, and other organs.

Endemic and epidemic diphtheria are similar in their nature, but usually epidemic diphtheria is much more contagious than endemic, although endemic cases do occur possessing intense malignancy and contagious power.

The micrococci of diphtheria do not differ, so far as observed, from the micrococci of furred tongue, or ordinary sore throat, except in their greater tendency to grow in culture fluids.

The theory of the disease deduced by the authors, from these and other observed facts, is, that the micrococcus, which causes the diphtheria, is a specific organism, not different from that common to healthy and inflamed throats, but is an active state of that organism, that certain circumstances outside of the human body are capable of throwing this common micrococcus into the condition of active growth and engendering an epidemic of diphtheria. When diphtheria is thus epidemic, the micrococci light upon a throat, and if the throat had little resisting power, as in the child, inflame it, or increase a catarrh already existing into a violent inflammation, and also rapidly enter the blood and cause systemic poisoning.

Students Manual of Electro-Therapeutics. By R. W. Amidon, M. D., Lecturer on Tharapeutics, at the Woman's Medical College, of the New York Infirmary, etc. New York, G. P. Putnam's Sons, 1884. 12 mo. Pp. 93. Price $1.00.

The writer of this handy little work is well known as a contributor to the literature of neurology. In this booklet his aim has been, "1. To present that amount of the subject of electrophysics necessary to the proper understanding of the construction and use of medical batteries. 2. To point out the commoner, gross physiological effects of electricity. 3. To outline the methods of electro diagnosis. 4. To determine the kind of electricity and its mode of application indicated in different pathological states."

The author has succeeded admirably in accomplishing what he set out to perform.

COLORED SWEAT is said to be due to the presence of a micrococcus.

PAMPHLETS.

Third Annual Announcement and Catalogue of the Woman's Medical College, of Baltimore.—Catalogue and Announcement of the Medical College, of Virginia for 1884-5.—Annual Catalogue of the Louisville Medical College.—Medical Department of the University of Wooster, session 1884-5.—Twenty-fourth Annual Announcement of Bellevue Hospital Medical College.—Prevention and Restriction of Cholera. Directions issued by the Maryland State Board of Health.—The Memphis Sewers after four year's use. By Geo. E. Waring, M. Inst., C. E. Reprint from *American Architect*, July 19, 1884.—A Contribution to the Study of Coryza Vasomotoria Periodica, or so-called "Hay Fever." By Jno. N. Mackenzie, M. D.—Reprint from N. Y. *Medical Record*, July 19, 1884.—On the Diagnosis of Tumors of the Anterior Mediastinum. By James C. Wilson, M. D. Reprint from Journal American Medical Association, July 12, 1884.—Public Health Laws of Illinois and Sanitary Memoranda. Published by the Illinois State Board of Health, 1884.—Announcement of the Missouri Dental College, for '84-5.

FLOTSAM.

THE quantity of beer consumed by the population of Munich during 1882, was 432 litres per head.

RHUS poisoning is reported as curable very speedly by the application of chloroform on brown paper or rag.

DR. RIGGIN BUCKLER, a prominent physician of this city, died at Narragansett Beach, on the 31st of August.

DR. WILLIAM OSLER, of Montreal, is mentioned as a probable succesor of Dr. Pepper, in the chair of Clinical Medicine in the University of Pennsylvania.

SPECIMENS of urine containing tube-casts can be preserved by the addition of a minute quantity of corrosive sublimate.

A CASE of indegenous leprosy is reported in the *Medical Record*, of August 16th, by Dr. W. H. Geddings, of Aiken, S. C.

THE *Medical Record and Medical News*, both had special cable reports of the meeting of the International Medical Congress.

A NEW medical college has been organized in the District of Columbia. Its title is "The Medical Department of the National University."

DR. MORELL MACKENZIE considers pills containing one grain of valerianate of zinc and two grains of assafœtida each, very valuable in hay fever.

DR. VIGOUROUX reccommends a glass of hot lemonade, every half hour or less as indicated, in diarrhœa. It certainly is pleasant, and is stated to be effectual.

SIR ERASMUS WILSON, Mr. Cæsar Hawkins, and Dr. J. J. Woodward are among the distinguished members of the profession recently called to their long rest.

CONTAGIOUS pleuro-pneumonia has appeared among Jersey Cattle in Illinois. Dr. Salmon, of the Bureau of Animal Industry, recommended that the infected herds be killed.

Dr. C. W. Chamberlain, Secretary of the state board of health of Connecticut, and one of the most active and progressive sanitarians in the country, died in Hartford, on Aug. 21st, aged forty years.

PROF. VIRCHOW has begun a series of popular articles on cholera in *Die Nation*, a weekly political journal of Berlin. He condemns the French for carelessness, and takes a conservative view as to the real significance of the cholera bacillus.

The Medical Chronicle.

BALTIMORE, OCTOBER, 1884.

ORIGINAL ARTICLES.

ARTICLE I.

DANGERS IN FOOD.

By GEORGE H. ROHÉ, M. D.

Professor of Hygiene and Clinical Dermatology, College of Physicians and Surgeons, Baltimore; Member of the American Public Health Association, etc.

[Read before the Second Sanitary Council of Md.]

That "man must eat to live" is an axiom, that has never, I believe, been disputed by even the most transcendental philosophers. Experimental physiology, as well as the collective observation of mankind, have shown that organic and inorganic matters in certain proportions and quantities are necessary to the preservation of health. It is also a matter of observation that under certain peculiar conditions, articles of food, ordinarily wholesome, may become unfit to fulfill their function of nutrition or may be, if consumed, the source of disease and death. By the invitation, and at the suggestion of the Secretary of the State Board of Health, I shall endeavor to indicate as briefly as I can, the conditions under which certain articles of food in constant use may become dangerous to the health and life of the consumer, and point out the general and individual measures necessary to avert such consequences.

The most important single article of food is

MILK.

It is the one perfect food found in nature. It is not merely the normal aliment for young infants, but human beings of all ages may under its exclusive use preserve life and strength. You can realize, therefore, how important it is that this food should always be pure, unadulterated, and free from all deleterious admixtures or modifications.

Leaving out of consideration the intentional poisoning of milk with criminal intent, with which we are not concerned in our present discussion, milk may be rendered unwholesome, first, by becoming impregnated with the germs of various diseases, from without; and secondly, in consequence of some disease or poisoning of the animal from which the milk is derived.

It has been abundantly proven that some of the most fatal contagious or infectious diseases that afflict the human race may be spread by milk to which the germs of such diseases have gained access. Mr. Ernest Hart, a distinguished English medical writer, has collected reliable evidence showing that up to 1881, fifty outbreaks of typhoid fever, fifteen of scarlet fever, and seven of diphtheria had been observed, in which the origin of the outbreak had been traced to the use of milk into which the germs of these diseases had been introduced.

At the time of writing (September 11th) one of the Baltimore newspapers contains a brief report of an investigation into the causes of a local epidemic of typhoid fever at Elkton in this State. The conclusion reached by Dr. Chancellor, the Secretary of the State Board of Health, is to the effect that the disease has been spread by infected milk. I understand that Dr. C. will give an account of his investigation before this Council.

The manner in which these disease germs gain access to the milk has been in most instances traced to the admixture of polluted water with the milk. It is not necessary to assume that the water is added with fraudulent intent, for the water used in cleaning the milk cans, pails and other utensils employed about the dairy may be—and probably is—the me-

dium through which the poison is conveyed to the milk. It is well known that most of the water for drinking and domestic purposes in this country is derived from shallow wells, which are often in close proximity to cess-pools, and thus liable to infection with disease germs. You can readily see how easily the milk can be contaminated by the accidental or intentional admixture of such water.

It is also stated by some authorities that milk exposed to an atmosphere containing the germs of typhoid or scarlet fevers, or diphtheria, may become infected. Cases are on record which seemingly leave no room for any other conclusion. Persons recovering from scarlet fever or diphtheria are not infrequently employed about dairies. It is not improbable that of the multitudes of fine scales thrown off from the surface of the body in convalescence from the former disease, some may gain access to the milk. The same may happen with the secretions from the throats of diphtheritic persons.

The milk of animals suffering from certain diseases, is likewise often dangerous to health. In some of the Western and Southern United States cows are not infrequently attacked by an acute febrile disease called "the trembles," from one of the prominent symptoms. The milk of cows suffering from this disease produces severe gastro intestinal disorder, collapse, fever, etc., in the consumer. This disease, called "milk sickness" is fatal in a pretty large proportion of cases. It is said that the flesh of animals with "the trembles," will, if eaten produce similar dangerous effects. A late writer (Dr. Beach, of Ohio), estimates that 25 per cent. of the Western pioneers and their families died of this disease.

A disease identical with pulmonary consumption in man frequently attacks cows that are kept in dark, damp and ill-ventilated stables. It has been asserted with apparently good reason, (although it must be stated that the assertion has been denied), that the milk of animals affected with this bovine tuberculosis may communicate the disease to human beings using it as food. If there is such danger it is evident that the source of milk used as food for children should be very carefully examined. The objections that have lately been urged against the use of milk from cows fed upon swill, brewers' grains, or distillery slops are based upon this danger, for it is a notorious fact that the majority of swill-fed cows are stall-fed cows, and such are in very many instances the subjects of bovine tuberculosis. In my opinion, the milk of swill or slop-fed cows may be as rich and wholesome as any other milk, provided the cows are housed in clean, dry, and well-ventilated stables, and often turned out to pasture. The danger does not lie in the food of the animal, but in the character of the animal's surroundings. If our city or surburban dairymen could be made to understand the importance of this, the outcry against "swill milk" would soon lose its effect. As things are at present, it is based upon a real danger.

The milk of cows suffering from the so-called cattle plague, contagious pleuro-pneumonia, or foot-and-mouth disease is also said to produce illness when drunk. The symptoms are generally referred to the gastro-intestinal tract.

Butter and cheese, or ice-cream, made from diseased milk, may take on a like poisonous character. I am not aware whether the recently observed cases of ice-cream poisoning in Brooklyn, N. Y., were due to diseased milk, or to the accidental or intentional admixture of a poison.

CHEESE

has often caused serious illness in people who have partaken of certain samples. Very recently an outbreak occurred in the State of Michigan. About one hundred and sixty-four persons who had eaten of certain cheese, were taken ill with pain and

burning sensation in the stomach, intense vomiting and purging, feeble pulse, cold extremities and tendency to collapse. All finally recovered. When the cheese was cut or broken, a whitish liquid oozed from the pores, and in the liquid microscopic organisms were found. The liquid was very strongly acid. Dr. V. C. Vaughan, of the Michigan State Board of Health, who made an analysis of the poisonous cheese, gives the following easily applied test of good cheese. He says: "Much has been written on the subject [of cheese poisoning] and many investigations carried on, especially in Germany. It has been variously ascribed to diseased milk, decomposition, and the development of fatty acids, etc., but we do not yet know what makes the cheese poison. Good cheese is only very slightly acid, and slowly reddens blue litmus paper. *The poisonous cheese was intensely acid, intensely reddening blue litmus when the paper was applied to the freshly cut surface.* This test for poisonous cheese appears to be practicable. The blue litmus paper could be applied by any grocer to each freshly cut cheese. If the litmus paper is instantly turned red by the liquid which oozes into the pores, the cheese is to be suspected as poisonous."

The poison may sometimes even be transmitted to nursing infants. Husemann refers to the case of a woman, who, while suffering from an attack of cheese poisoning, nursed her child, which was also attacked by choleraic symptoms.

UNWHOLESOME MEAT.

It is a serious problem of public hygiene to determine to what extent diseases of animals render their flesh unfit for use as food. There seems no room to doubt that the flesh of animals suffering at the time of death from splenic fever, foot-and-mouth disease, symptomatic anthrax, and contagious pleuro-pneumonia will, if consumed, produce serious or fatal diseases in the consumer. It is well-known that the use of meat containing animal parasites, such as trichina spiralis, echinococcus or cysticercus, will often result in very grave affections in persons eating such meat, especially if not properly cooked.

It has been shown beyond question that the flesh of beeves suffering when killed, from splenic fever, will produce this disease in the human subject.

In 1874 an extensive and violent outbreak of an acute disease characterized by vomiting and purging, fever and dizziness, occurred at Middelburg in Holland. Three hundred and forty-nine persons were attacked, of whom six died. The outbreak was traced to eating liver-sausage (Leberwurst), in which the characteristic bacillus of splenic fever was found on microscopic examination. In July 1877, an outbreak of choleraic disease, from eating carbuncular meat occurred in the town of Wurzen. In the latter epidemic the bacillus of splenic fever (*bacillus anthracis*) was found in the intestinal canal and in the blood of those attacked.

In Detmold, in Germany, an outbreak of violent gastro-intestinal inflammation, accompanied by high fever, occurred. Among the one hundred and fifty persons attacked three died. The disease was traced to eating the meat of a cow suffering before death from pleurisy, (probably pleuro-pneumonia). In view of the somewhat extensive prevalence of this disease among cattle in this country at the present time, the record of this outbreak may suggest to sanitary authorities some measures for the prevention of similar epidemics on this side of the Atlantic.

In July, 1880, seventy two persons who had eaten of certain beef and ham sandwiches in Welbeck, England, were attacked by choleraic diarrhœa. Four of the cases died. Inflammations of the lungs and small intestines were the most prominent pathological conditions found *post-mortem*. The smaller blood-vessels

of the kidneys were filled with finger-shaped bacilli, which, when cultivated and inoculated into guinea pigs, rats, and white mice, produced similar pathological conditions. At Nottingham, England, in 1881, a number of persons were attacked by a similar train of symptoms after eating baked pork. One case terminated fatally out of the fifteen attacked. It is uncertain whether the meat in these two instances was from diseased animals, or whether it had undergone partial decomposition. The former is the more probable supposition, although the organisms found were neither those of splenic fever or swine plague, but resembled those of symptomatic anthrax (black leg, or black quarter).

Whether the flesh of tuberculous animals can communicate tuberculosis to the consumer is still an unsettled question. Foreign veterinarians and hygienists who have studied the question incline to the view that there is danger of such transmission. At the International Sanitary Congress of 1883 at Brussels, the subject was discussed, and M. Lydtin, the chief veterinary surgeon of the Grand Duchy of Baden, submitted the following propositions, which were adopted by the Congress:

1. That the flesh and viscera of tuberculous animals may be used as food, provided the disease is only commencing, the lesions extending but to a small part of the body, the lymphatic glands being still healthy; provided the tubercle centres have not undergone softening, and provided the carcase is well nourished, and the flesh presents the characters of meat of the first quality. 2. That the flesh of animals showing very pronounced tuberculous infection should be saturated with petroleum, and afterward burnt under the direction of the police. 3. That the milk from cows affected with pulmonary phthisis, or suspected of having it, should not be consumed by man or other animals, and the sale of it should be strictly prohibited.

Within the past year the trichinosis question has occupied a considerable share of the attention of the public. The press has given pretty detailed accounts of the formidable outbreak of the disease in the town of Emersleben, Saxony, and vicinity, about a year ago. Three hundred and seventy-six persons who ate pork bought of a certain butcher, fell ill of trichinosis, and fifty-three died. The commercial and political complications arising out of this epidemic will readily be remembered. The statements in the American newspapers were calculated to leave the impression on the public mind, that trichinosis is a practically unknown disease in this country. This is decidedly erroneous. A considerable number of cases of trichinosis in man are on record in American medical and sanitary literature. The fact that American pork is not rarely infected with trichinæ has also been abundantly established. Dr. F. S. Billings, a veterinary surgeon of Boston, reports having personally examined 2,701 hogs, and claims that he found 154, or 5.7 per cent. of them trichinous. In a recent report from the Illinois State Board of Health (*Medical Chronicle*, March, 1884), three limited outbreaks of the disease which occurred in November and December, 1883, in Illinois, are recorded. Three of the patients died of the disease. Dr. Rauch, the Secretary of the Board, states that since 1866, sixteen deaths from trichinosis have occurred in that State. In July of the present year, twelve cases of trichinosis, with two deaths, occurred at Arietta in the State of New York. (*Medical Annals*, August, 1884). All of these patients had eaten raw ham, which it was afterward ascertained, was packed and shipped in Chicago. Microscopic examination showed the presence of the trichinæ in the muscles of one of the fatal cases. These brief references are sufficient to establish the fact that American pork is sometimes trichinous, and that it may communicate trichinosis to persons

eating it, if proper measures of prevention are not taken.

Cysticercus cellulosa, the transition form of one variety of tape-worm, and which is the parasite in measly pork, may also gain entrance to the human body, and, failing to undergo development, cause very serious lesions of various organs and tissues. The frequency of tape-worm is evidence that pork is often thus diseased.

The use of partially decayed meat or fish, has often been the cause of serious or fatal illness. Sometimes the illness partakes of the character of septic infection. In these cases it is probable that the morbid process is due to the action of the organisms of putrefaction. In other cases, the symptoms are widely different. These cases have been the source of much perplexity to physicians and toxicologists until very recently. Within the past six years, however, Selmi, Husemann, Brouardel, Casali and others have drawn attention to certain intensely poisonous chemical compounds found in decomposing flesh, and which have been named by Selmi, *ptomaines*. While there is still much uncertainty concerning the nature of these compounds, it seems pretty well established that when flesh undergoes decomposition, in the absence of oxygen, certain unstable chemical combinations are formed which act as violent poisons. Selmi, followed by most toxicologists, believes these compounds to be alkaloids, analogous to the vegetable alkaloids, such as morphine, atropine, etc. Casali, on the other hand, disagrees with this opinion and believes the ptomaines to be amido-compounds. Husemann regards Casali's hypothesis as plausible, inasmuch as the formation of amido-compounds in animal and vegetable bodies, and during decomposition, is well established.

The form of poisoning due to the organisms of putrefaction is not infrequent. An extensive outbreak of this nature occurred at Andelfingen in Switzerland, in 1839. A musical festival was held at which there were over seven hundred persons present. Out of these, four hundred and forty-four were suddenly attacked by violent gastro-enteric and nervous symptoms. Ten of the patients died. The illness was traced to roast veal, which had been kept in a warm place for two days after roasting, and which was probably in a state of partial decomposition.

The class of cases which seem more probably due to the action of ptomaines or related poisons, have been frequently observed after eating sausages, or canned meats. Sausage poisoning is not rarely observed in Germany. It has been ascertained that the internal portions of the sausage are the most poisonous. It is supposed that the ptomaines which are formed in the absence of oxygen are the active agents in the production of the train of symptoms. Poisoning by canned meat seems to be due to a similar poison.

Fish, oysters, crabs and lobsters, frequently give rise to symptoms of poisoning. In most of these cases the poisoning is probably due to partial decomposition, but it is a well-known fact that oysters and crabs are unfit for food at certain seasons. Some persons, however are subjects of a peculiar idiosyncrasy, in consequence of which, shell-fish always produce certain unpleasant symptoms, among which nettle rash and a choleraic attack are most prominent.

That form of fish-poisoning known among the Spaniards, in the West Indies, as *siguatera* is, however, very grave. The mortality is large, and in many cases, death succeeds rapidly upon the attack. The symptoms are as follows: Sometimes suddenly, sometimes preceded by dizziness and indistinct vision, great prostration and paralysis occur. Often death follows the onset of the symptoms in two and three hours; exceptionally in less than twenty minutes. In most cases consciousness is totally lost; in others, it persists,

with interruptions, until death. Sensation and the powers of speech and deglutition fail. The jaw muscles become paralyzed, the pulse is slowed, and the temperature diminished. There is sometimes vomiting, but no purging. The secretion of the kidneys is also checked. The president of the State Board of Health, Dr. McSherry, states (*Health and How to Promote It*, p. 143,) that he has seen all the gastro- enteric and nervous symptoms of siguatera produced by eating oysters, lobsters and crabs unseasonably.

In Russia, a form of poisoning has often been observed which results from eating salted sturgeon. In the fresh state these fish are perfectly wholesome, but when salted and eaten raw they produce a very fatal illness. The mortality is said to reach fifty per cent. of those attacked. So far as I am aware no cases traceable to this cause have been observed in this country.

CANNED FOODS.

The vast importance of the canning industry in its various branches in this State, renders it unnecessary to tender an apology for dwelling a few moments upon the relations of canned foods to health. The charge has frequently been made of late that canned vegetables and fruits often contained poisonous salts of lead or tin. Mr. A. Winter Blyth, an English sanitary officer, reports having made analyses of twenty-three samples of canned fruits, including apricots, tomatoes, pine-apples and cranberries. In two samples of the apricots, tin was found in the proportion of 11.05 grains to the pound. The smallest quantity found was 1.58 grains, in a can of the tomatoes. Dr. Henry Leffmann, of Philadelphia, has also found tin in canned peaches analysed by him. The proportions were quite small, and in all cases the fruits were over a year old. Drs. Unger and Bodlander have made similar analyses of canned fruits and vegetables in Germany, and found tin in every sample examined. The metal was, however, in very small proportion, not exceeding 1-25th of 1 per cent in any case. Following this, however, comes Prof. Attfield, a distinguished London chemist, who states that he has frequently examined canned foods during the last fifteen years. He has found tin, at times, but the quantity was too small to deserve notice His results seem to agree with those of the authors last quoted. In his opinion "given after all evidence hitherto forthcoming, the public have not the faintest cause for alarm respecting the occurrence of tin, lead, or any other metal in canned goods."

Opposed to this, however, is the testimony of Dr. Jno. G. Johnson, a practising physician of Brooklyn, N. Y., who reports, (*Sanitarian, June 1884*), six cases of "corrosive poisoning from eating canned tomatoes." Dr. Johnson thinks the poisoning in his cases was from muriate of zinc and muriate of tin resulting from using muriate of zinc as a flux in soldering the cans, These cases, however, are of no value in helping us to a conclusion, because no chemical examination was made of the supposed poisonous food, or of the matters discharged from the stomach and bowels of the patients. This writer makes a statement which requires notice here. Quoting the New York *Herald* of April 18th, 1883, as authority, he says the "State of Maryland has a law prohibiting the use of the muriate of zinc flux." I have not been able to obtain any confirmation of the statement from canners of Baltimore. If such a law exists here, however, it is daily violated. Thus, it will be seen that there is very little definite knowledge in our possession upon the relations of canned foods to health. The following may be stated as facts:

1. Competent chemists have found tin, in suspiciously large quantities, in cans of preserved food.

2. Cases of poisoning, apparently due to some corrosive agent, have

been noted after eating canned food.

3. Cases of poisoning after eating canned food, apparently due to partial decomposition of such food, have been frequently observed.

PREVENTIVE MEASURES.

After the recital of these facts, I think it needs no argument to prove that preventive measures should be instituted against the sale and use of poisonous food. Individual measures of prophylaxis will not suffice; a collective effort on the part of the State must be made. Maryland has passed laws in the interest of the consumer looking to the detection and prevention of fraud in the sale of food. The compulsory inspection of canned oysters, is one of these beneficent acts. There is, however, no provision in the statutes, so far as I am aware, which protects the consumer against diseased or tainted meats, adulterated or diseased milk, or poisonous canned food. It seems to me, this Council should take cognizance of this defect in our State laws, and urge the subject upon the attention of the people. Laws will only be made when they are demanded by public opinion. To create and foster an intelligent public opinion concerning public health is one of the duties of an organization like this. If judicious action is taken, success will follow.

The question will be asked: What is the character of the measures to be taken by the State, and by individuals to prevent the dangers referred to. I shall endeavor to answer as briefly as possible. The State must inspect, through competent agents, all articles sold as food, which are liable to produce disease. The milk, cheese, meat and fish must be regularly inspected before being offered for sale. All food animals must be inspected both before and after slaughter, and the sale of all diseased meat strictly prohibited. Splenic fever, contagious pleuro-pneumonia, foot and mouth disease, cattle, or swine plague can be detected in animals suffering from these diseases. After death the gross and microscopic pathological conditions will give similar information. Pork should always be examined microscopically for evidences of trichinæ and cysticerci. It is manifest that such inspection cannot be carried out in a city unless the slaughtering is done at a limited number of places. A centralization of the slaughtering business will be necessary. Boston, New York, New Orleans, Chicago, Philadelphia, Cincinnati, Pittsburg and Jersey City have solved this problem by the erection of public abattoirs, resulting in the abolition of the private slaughter house, with its manifold outrages against decency and public health. Are we willing to allow these communities to maintain the advantage they have already gained over us? I trust not.

The sanitary inspector of food should also ascertain the conditions under which milk-giving animals are housed and cared for, and whether care is taken to prevent infection of milk by the germs of specific diseases. The mere physico-chemical examination of milk, as practiced in some cities can only prevent fraud, but is no safeguard against diseased milk.

It is clearly evident that a person competent to intelligently perform the duties required of the official here denominated the inspector of food, cannot be found among those who seek positions merely as a reward for party service, or because they have political influence. The inspector must not only be a physician or veterinarian, but he must be familiar with the principles and practice of preventive medicine, and must possess above all else, common sense and sound judgment.

But the mere inspection of food will not be sufficient to prevent the dangers which exist. Power must be given the health authorities to take such action as is necessary to protect the public. If loss results to

individuals through no fault of theirs, the state must reimburse them. Vested rights must be respected and legitimate business must not be obstructed or otherwise injured. If anyone, however, wants to prosper at the expense of the health of his fellow man, let him suffer a just penalty.

Respecting the relations of the canning industry and of canned foods to the public health, I venture to suggest that this Council can in no single act better signalize its usefulness than by the appointment of a commission, either from among its own membership, or outside of it, whose duty it shall be to thoroughly study the question in all its phases and bearings. The scope of such an inquiry will suggest itself.

Among the individual prophylactic measures against unwholesome food, the first is to reject all articles which from their appearance, taste or *price*, are open to suspicion. Uncleanliness, beginning decomposition, unusual taste, odor, or appearance of food should be sufficient reason for avoiding its use. Pork should always be thoroughly cooked in order to destroy the life of trichinæ or other parasites, and this procedure will likewise render poisoning by diseased meat of other kinds less likely to happen. Milk infected by the germs of various diseases will probably lose its infective character after thorough boiling, although too much confidence must not be placed upon this. In selecting canned foods, those cans which are swelled out at the ends, showing partial decomposition of the contents, or which exhibit evidence of having been re-processed, which is easily detected by the presence of a second sealed vent in the cap, should be rejected. It would also be safer to avoid the use of any canned goods which have been put up longer than one year. There seems good reason to believe, that most cases of poisoning by canned foods have resulted from articles which had been packed a long time.

Any personal idiosyncrasy concerning an article of food, should be sufficient to enjoin its use. Shell fish should not be eaten out of season.

CORRESPONDENCE.

A Man with a Nail in his Brain.

Editor "Chronicle."

"The man with a R. R. spike in his head," is the caption of an *editorial* which appears in the *Maryland Medical Journal* for August 2nd.

In that article the writer puts forth such gigantic efforts to impress his medical brethren with his ability as a writer and surgeon, that he loses sight of the necessity for truthful statements in such writing; and while I duly appreciate the kindness of the writer in pointing out the views of various authors on the management of injuries of the head, I depreciate his way of making assertions which have no foundation in fact, or his mode of relating the history of a case, the facts in which he knows nothing of, and at the same time puts forth no effort to secure them. This certainly seems to be the case with the writer of the editorial, for he says:

"On July 17th, a man was found in a dazed condition. Subsequently, his wife noticed a R. R. nail projecting from his skull. A physician was called who extracted the nail which had penetrated his brain several inches." One reading the above would be led at once to believe that I had been called the same day the accident occurred and had the advantage of sufficient time to institute treatment for the prevention of inflammation and its consequences. To commence a thing wrong, invariably means to end wrong, and so is it with this editorial. The very first line is false, for Valentine Fritz was brought home on *Tuesday*, July 15th, 1884 (not the 17th), where he lay until the afternoon of the 17th with a spike nail $\frac{3}{8}$ of an inch in diameter passing into the brain substance for $2\frac{3}{4}$ inches,

it being 3¼ inches long. The writer notes the fact that I removed the nail, but without knowing what size hole such an instrument would make by slabing, etc., in passing through a brittle skull, and without knowing that the patient was 67½ years of age, or that the opening was large enough to pass in my little finger and forceps, which was done, and a piece of bone removed. He says that no further operative treatment *seems* to have been attempted, and notwithstanding the fact that my patient was nearly 70 years old, he would compare mine with the one that Erichsen in his work relates: that of a boy who had a nail driven simply through the skull *bone*, doing no damage itself to either the brain substance or the membranes, and making a hole so small that a probe could only be admitted. Again, this very small nail was withdrawn as soon as it had entered the skull, therefore, was not similar to mine in hardly any respect; in my case we had a large spike passing not only through the skull, but into the brain substance for 2¾ inches, and remaining there for possibly 48 hours, making a hole sufficiently large to permit the escape of decomposed matter when the spike was withdrawn; also a small piece of bone through it. Notwithstanding the above facts the writer claims the two cases to be identical, and because the trephine was used in the case of Erichson with success, he intimates the same result would have followed that operation if it had been performed in my case, regardless of the condition of the two patients or the extent of their injuries, etc.

Again he says: 4 or 5 days afterwards the man died (that is to say, 4 or 5 days after the 17th). This statement is untrue also. I took the spike out at about 2 P. M. of the 17th, the man died on the night of the 20th, about midnight, which, according to my way of counting, I would call about three and a half days. Of course this is a small point; but, if we are to have a history of a case, we might as well have the truth if it can be secured. In regard to the *post-mortem*, he says: as might have been expected, it revealed a comminuted fracture of the internal table of the skull with fragments pressing upon and irritating the membranes of the brain, *with consequent* meningitis *and cerebral abscess*; that is to say, if the fragments of bone had been removed when I was called on the 17th, though they had been there since the morning of the 15th, long enough to set up (with the spike) inflammation and suppuration, there would have been no "consequent meningitis and cerebral abscess," ignoring in this statement entirely the injury done to the brain by the spike. This assertion, to my mind, is as reckless as it is untrue.

As to the fragments, I would say that I removed a small one the day I removed the spike. The *post-mortem* showed another small one on the inner table which did not cause any irritation to speak of, for the membrane in the immediate vicinity of the *large* opening was dead, sloughing the day I withdrew the spike; there were also two very minute particles of bone upon the membrane, and they were firmly held by inflammatory adhesions. After taking into consideration the above facts with the patient's condition, which was very low and bad, with his age, etc., I concluded that an operation would do him no good. Two other physicians who saw the case believe the same thing.

J. D. BLAKE, M. D.

An Extraordinary Case of Strangulated Direct Inguinal Hernia.

Editor "Chronicle."

I was called on the night of the 4th of May to see Mr. S., aged seventy-eight years, suffering from strangulated hernia. He has had reducible hernia for thirty years. On the morning of the 4th inst. it came down, and he tried to put it back in his usual way; but finding he could not succeed, called in several neighbors (non-

professional) to manipulate, with the same result. Having tried to reduce the hernia by taxis without success, on the morning of the 5th a consulting physician was called in, and after using taxis without relief, concluded to operate at six o'clock same evening. We met at the appointed hour, and Mr. S. concluded that he would rather die than be operated upon. We argued with him and told him that operating was the only hope of saving his life, but without avail. He adhered to his determination and would not let us operate. I left him anodynes to relieve pain, and saw him for several days in succession. About the ninth day he commenced to vomit fecal matter; every thing that was given him was immediately rejected.

At my visits I gave him morphine hypodermically, and told him that he would certainly die, and discontinued my visits. On the twelfth day he sent for me again, and as I entered the room he said: "Doctor, for God's sake, stick some more aqua fortis in me or I will die." So I used the needle again and visited him from time to time. On the night of the 30th inst. about midnight, as he was rolling in bed, all at once, he said, something cracked like a pistol, and the gut went back in its proper place. His daughter was in an adjoining room, heard the noise and went to her father. He told her he thought he felt better, and from that time began to get better. He is now as well and hearty as before the accident.

What is remarkable about this case is that he ate nothing for twenty-seven days; that he had stercoraceous vomiting; that mortification did not set in, and carry him off, and that the gut went back itself after being constricted twenty-seven days. During all this time he did not have one evacuation. The greatest trouble I had afterwards was to control the bowels and get his digestive organs in a proper working condition; but I finally succeeded in a few weeks. I have never heard of, nor have I ever read of a case in any way similar to this one. If any of my professional brethren have had a case to compare with this one, I would be glad to hear from them through the pages of the MEDICAL CHRONICLE.

L. B. SAULSBURY, M. D.
Hillsboro, Caroline Co., Md,

Iodoform Ointment.

Editor "Chronicle."

There is a great objection to the use of iodoform ointment, especially among the better class of patients, on account of its bad odor. Some ingredients used to disguise the smell are objectionable, such as tannic acid, etc., from the fact that new compounds are formed and the full effect of the iodoform is not had. But, if benzol, eucalyptol, or ol. myrciæ are added in the proportion of 3 to 5 drops per ounce of ointment it will make a preparation that is greatly improved in odor, without inducing any chemical change. Recently it has been used here in the hospital and has given satisfaction.

I hope the readers of the CHRONICLE will give it a trial, and feel sure they will also find it satisfactory.

C. C. HERSMAN, M. D.
Weston, W. Va., Sept. 4, 1884.

ANALECTS.

Foreign Bodies in the Eye.

Dr. Agnew, of New York, writes: When a patient comes to you complaining of a sensation as if a foreign body were in the eye, you should first examine the eyeball from every point of view. You should then turn over the eyelids and examine their inner surfaces. And here I am reminded of a source of error to which I would call your attention. A few days ago a case came under my observation which illustrates the point. The gentleman had had occasional attacks of conjunctivitis for a year or more. He had then a sensation as if a foreign body were in the eye. On turning

out the right lower eyelid, all that was revealed to sight was a slight redness of the conjunctiva. But there was something in the way in which the sensation of a foreign body in the eye was exagerated that made me suspect that he had a single inverted eyelash. Ordinarily he felt as if some irritant was there which was tolerable, but suddenly there would be a cramp-like action of the eyelid, the irritation would grow rapidly worse, and the eye would fill with tears, followed by -the discharge of a little mucus, and temporary relief. His beard was of a sandy color, his hair was light brown, and his eyelashes were almost colorless. I looked very carefully along the edges of the lids in search of inverted eyelashes, and saw on the inner edge of the lower lid, a slight curving of the inner angle. By allowing a tear togath upon this inner edge, I saw that there was a difference in refraction in different portions of the tear, and it soon became evident that a delicate decolorized eyelash was there,which instead of growing from the outer edge of the lid, sprang from the free edge of its inner border. I turned the lid over, and found that this delicate eyelash, which was between the edge of the lid and the eyeball, had been so long caught in that position that it had worn a little groove in the edge of the eyelid; the spasmodic action of the orbicularis, from time to time, so long continued, had embedded the eyelash in the substance of the lid. I removed it, and no further trouble was experienced. This patient had been treated in Europe for acute conjunctivitis several times, and it is possible that the eyelash was on those occasions the cause of all the trouble. An operation will be required to destroy the follicle which produced the misplaced eyelash. So, when a patient comes to you complaining of a sensation as though there was a foreign body in the eye, between the eyelids and the eyeball, you must first look for conjunctivitis. Whether this be present or not, you should then proceed to examine the eye very carefully to see whether a foreign body be present or not. Scan carefully the whole surface of the cornea and of the scleral conjunctiva, and then turn over the upper eyelid, and carefully inspect its inner surface. You may then scrutinize the edges of the lids, as I have described, in order to see whether the source of the irritation be an inverted eyelash.—*Boston Med. and Surg. Journal.*

Male Hysteria.

The subject of hysteria in males has lately been brought prominently before the Berliner Medicinische Gesellschaft, says the *Medical Times*, August 9th, 1884. A prolonged discussion upon some of the points raised served to show very clearly that the nature and origin of the phenomena, so frequently grouped together under that convenient title, are as far as ever from any clear and conprehensible definition. The constant association of hysteria with affections of the uterus, or indeed of any single organ, has long since been disproved, but its frequent association with disease or disordered function of some of the viscera, is clearly shown by many recorded cases. It is only of recent years that the occurrence of hysteria in males has been fully recognized, and the proportion of male to female cases formerly given by Briquet is 1 to 20, is probably somewhat below the mark.

Heredity is a marked feature in these cases, and there is usually a history of nervous irritability in childhood. The period of youth and puberty is the most common time for hysterical phenomena in males, whereas in women there is no period of life exempt from the liability. In this paper on the subject Herr Mendel relates some typical cases, and points out that in some instances a kind of a dual existance appears to be present in which the patient may be in perfect health with intervals of hyste-

rical disturbance of the nervous system, the memory in each state retaining no impressions of the events taking place in the other. He draws a marked distinction between hysteria and hypochondriasis. In cases of the latter class, the patient seeks out a cause for his discomforts, and fixing his mind upon one point, cannot be reasoned or persuaded out of the truth of it, no matter how absurd and inconsistent it may be. The hysterical patient on the other hand exhibits greater variety of functional disorders, is much inflenced by his surroundings, and gives every evidence of nervous instability. Hence the rapidity with which hysterical cases may be cured when entirely removed from old associations and the sympathy of relatives. Among the complex symptoms characteristic of hysteria, is that of local pain. Until recent years this local pain has generally been believed to be pelvic and to be associated with the ovaries.

Many cases, however, were cited in the debate on Herr Mendel's paper in illustration of the fact that such painful spots may also be found elsewhere. Pain localized in the right ovarian region was found to persist unaltered in a case in which the ovary and a tumor connected with it had been removed by Herr Landau, and hence it could not be dué to direct local causes. In his remarks upon the case, however, the operator expressed belief that the pains are essentially to be regarded as forms of visceral neuralgia, having some peripheral origin, most probably in the genital apparatus. In an interesting case related by Herr Senator, two painful spots were discovered, symmetrically situated over the parietal bones, in a boy who exhibited very marked hysterical symptoms. Pressure on these spots, even during sleep, at once set up violent crying and struggling. The case was rapidly cured by isolation. The relation of these painful spots to the condition of hemi-anesthesia in woman is not as yet determined, but a few cases have been recorded by Remak and Landau, in which a bimanuel examination of the ovary of the affected side proved the organ to be exquisitely tender. In one instance, with similar symptoms, the painful apot was localized in a movable kidney.—*Boston Med. and Surg. Journal.*

How Massage feels.

"Clara Belle," one of the most brilliant of the secular newspaper correspondents, writes as follows of her experience under the hands of a professional masseuse:

The old woman grabbed me by one foot, yanked it, twisted it laterally, and then tried to kick the top of my head with it. The same operation was performed with the other. Next she gripped my hand, pulled it rapidly in a dozen successive directions, dislocated the arm at the shoulder, distorted it at the elbow and crumpled it on my breast. Ditto with the other arm. My head was then waggled all ways, until my neck felt as though it moved on a toggle-joint. Fifteen minutes of that kind of thing left me as sore and strained as though Spanish inquisitors had been torturing me. I suppose I was six inches taller and a heap sprawlier than before.

But the second stage of the massage rendered me as compact as ever. It consisted of rubbing until the skin was pretty much like a boil all over, and then of pounding with the backs and palms of the operator's big hands. She went over me again and again, regardless of my feeble remonstrances, and declaring that I would feel ever so much better after it was all over. How grateful I was when she said she was done, and I found that I could still breath in a gasping way. I don't know how a table cloth feels after being run through a steam mangle, but I imagine that it is something similar to what I experienced.

Differential Diagnosis of Simple and Tubercular Meningitis.

In an analysis of a number of cases of meningitis occurring in the Children's Hospital at Stockholm, Dr. O. Medin (*Revue Medicale*) endeavors to formulate the points of difference in the tubercular and simple forms of the disease. Tubercular meningitis attacks only those children already suffering from tuberculosis of other parts, while simple acute meningitis occurs usually in previously healthy individuals. The former manifests its onset by convulsions, frequently strabismus, and dilatation or contraction of the pupils. Vomiting is frequent at the commencement, diarrhœa is the usual condition, and constipation is rare. The abdomen is never flat. The simple form begins with somnolence, twitchings, sudden changes of color in the face, and hyperesthesia. More frequently than in the tubercular form we meet with the hydrocephalic cry and paralysis limited to the arms or to the face. The tubercular variety is always fatal in its termition.—*St. Louis Jour. Med.*

Treatment of Cholera.

From the *Medical Record* we learn that Horner's anti-cholera mixture, recommended by Hartshorn and Bartholow, may be used before or at the beginning of the stage of collapse:

℞. Chloroform.
Tinc. Opii.
Spts. camph.
Spts. ammon. aromat. ää f. ʒ jss.
Creasote, gtt. iij.
Olis. cinnamomi, gtt. vij.
Spts. vini. gall., f. ʒ ij.

M. Sig.—Gtt. x. to xx. in ice water every five minutes.

A hypodermic injection of morphine is a most effective remedy for the diarrhœa and cramps.

Cholera specifics do not exist. Oxygen, saline venous injections, chloride of sodium drinks, warm baths, calomel, camphor, venesection, have all failed.—*Med. and Surg. Rep.*

A Practical Point in the Treatment of Pleural Effusions.

Dr. Broadbent, in a clinical lecture, says when he hears distinct bronchial breathing generally over the chest in cases of pleural effusion, he feels sure that a consolidated lung is immersed in the fluid, and he consequently does not tap unless the symptoms are so urgent as to demand interference. A solidified lung cannot, of course, expand, as does one which is simply collapsed or even compressed, unless it is bound down by adhesions; and experience has shown him that on the resolution of the pneumonia the fluid is usually rapidly absorbed.

He seems to hold the sound views that with grave symptoms a pleural effusion should be withdrawn, whatever the complication; that the course of moderate effusion may often be shortened by tapping; but that if the lung be consolidated,—one evidence of which is the persistence of bronchial respiration over the whole or a large part of the chest,—it is better to wait, if the condition of of the patient warrants such a course. *Boston Med. and Surg. Journal.*

Purification of Drinking Water.

The following method, proposed by Professor Almen, of Upsala, is recommended by Husemann: To a quart of water are added a drachm of 5 per cent. solution of chloride of iron, and from 1½ to 2 ounces of lime water. The ensuing reddish-brown precipitate removes all the floating particles and from 40 to 80 per cent. of the soluble organic matters. When this precipitate has settled to the bottom, the water is filtered through sand or fine linen.—*Deutsche Medicinal Zeitung.—Medical Record.*

Iodoform Collodion.

Iodoform, ten parts; collodion, ninety parts. To be applied with a camel's hair brush, the wound being held shut until it dries. For wounds in exposed situations.—*Col. and Clin. Rec.*

The Use of Large Dose of Ipecacuanha in Simple and Sloughing Dysentery.

Some years back, in capacity as Government Medical Officer to the Immigration Department, Natal, with a daily average of, say, over twenty patients suffering from dysentery alone, I had every opportunity of testing the efficacy of its treatment by the above mentioned drug; and I have no hesitation in fully indorsing Dr. Ewart's advocacy of full doses—say from forty to sixty grains—of powdered ipecacuanha; but I would call attention to one most important precaution, of which I see no mention in Dr. Ewart's interesting paper, that is the denial of all fluids for from two to three hours previous and subsequent to the exhibition of the drug, which in almost all cases totally counteracts any tendency to emesis or even nausea, but is a complete bar to (as far as my experience goes) the comparatively abortive treatment of repeated small doses. Briefly, my rule of treatment was: Denial of all fluids for, say, two hours; then insert an opium suppository; twenty minutes afterwards apply a large linseed poultice sprinkled with mustard to the epigastric region, followed in ten minutes by forty grains or upward of powdered ipecacuanha, inclosed in wafer paper (failing wafer paper, cigarette paper suffices) with not more than a dessert-spoonful of milk or thick rice-water to assist deglutition; the recumbent position, quietude and denial of all fluids for at least two hours subsequently to be strictly enforced. Used in this manner I can safely assert that ipecacuanha proved in hundreds of cases no less a specific in dysentery than quinine in the equally prevalent disease of malarial fever; but I may add, *apropos* of the latter drug, that I found the *coup-sur-coup* treatment—say one to three grains every three hours—gives far better results than the heroic doses of from twenty to thirty grains in vogue in the island of Mauritius.—*Lancet.*

Effects of Pilocarpine on Serous Effusions.

De Domenicis, in London *Medical Record*, says:—Great benefit may be obtained from the use of pilocarpine in all serous exudations, rapid absorption taking place. He gives shortly the history of some cases of both acute and chronic peritonitis in which the administration of jaborandi or pilocarpine was followed by rapid recovery. When the effect was not obtained, it was due to some special complication of the disease. In the course of these experiments in treatment, the author made careful observations on the mode of action of the drug, from which he arrives at the following conclusions:

1. The systolic force of the heart, except during the stage of sweating, is increased rather than lessened, unless the nutrition of the myocardium is interfered with. 2. The effects on the sudoriparous glands endure after the repeated administration of the drug. 3. Caffein and quinine moderate the drug in its action.

Gingivitis.

Canquil (*Bul. Gen. de Therap.*) recommends the use of chromic acid in mercurial gingivitis. In the venereal department of Montpelier, Roustan employed this form of treatment. In many instances two or three applications of a 5 per cent. solution applied to the gums by means of a brush is quite sufficient to produce the required result, C. reports a number of cases of gingivitis produced by the gray salve, where the application was made at intervals of two days, with the result of curing the case. In two cases of angina, with enormous hypertrophy of the tonsils (syphilitic), chromic ccid proved to be the most effectual remedy, after a number of other drugs had been used. In the cases the remedy was applied four times in the course of two days, resulting in the cure of both patients.—*Therap Gaz.*, July.

Iodide of Potassium in Pneumonia.

Regarding pneumonia as a general disease with local manifestations, Dr. Schwarz recommends the use of iodide of potassium in six grain doses, every two hours, at the same time applying an ice-bag to the chest over the seat of the pulmonary lesion. All his cases thus treated recovered, some of them within two days. Dr. Gualdi (*Gazetta Medica di Roma*) has similarly treated a number of cases and reports most excellent results. He formulates the following conclusions based upon his experience with this mode of treatment. 1. Schwarz's method of treating pneumonia gives good results. 2. These results are even better in the case of children than that of adults. 3. The treatment should be instituted at the beginning of the disease, for when commenced at a later stage the cure is less rapid and satisfactory. 4. The action of the iodide is exerted upon the fever and the general disease, and not upon the local lesion. 5. The iodine and the potassium become separated within the organism and each of them exert a special effect. 6. The action of the ice is upon the local condition. It is useful in the period of pulmonary congestion, but injurious in the stage of hepatization.—*N. Y. Med. Rec'd.* July 5th.

Medical Treament of Dysmenorrhœa.

Dr. Barker, of New York, believes (*American Journal of Obstetrics*, October, 1883,) that mechanical obstruction as a cause of dysmenorrhœa exists in only a small percentage of cases—that there are two forms of the disease, one uterine and the other ovarian. In the uterine variety there are cases which do not depend at all upon obstruction; the pain is due to the effort of the uterus to relieve the plethora by the rupture of the capillaries and the exfoliations of mucous membrane. He uses the lactate of iron in doses of from three to five grains three times a day, associated with chlorate of potash. As soon as the symptoms of menstruation begin he gives apiol, which he looks upon almost in the light of a specific. In ovarian dysmenorrhea there is no pain until the flow has continued for two or three days; then the cause was ovarian, and the bromide of sodium in ten to fifteen grains doses in the middle of the forenoon, in the middle of the afternoon and at bedtime was the proper treatment.—*Weekly Medical Review.*

Better to Wear Out than to Rust.

The late Prof. Samuel D. Gross at a dinner given to him in Philadelphia on April 10, 1879, said: "After fifty years of earnest work I find myself still in the harness; but although I have reached that age when most men, tired of the cares of life, seek repose in retirement and abandon themselves to the study of religion, the claims of friendship, or the contemplation of philosophy, my conviction has always been that it is far better for a man to wear out than to rust out. Brain work, study, and persistent application have been a great comfort to me, as well as a great help; they have enhanced the enjoyment of daily life, and added largely to the pleasures of the lecture room and of authorship; indeed, they will always, I am sure, if wisely regulated, be conducive both to health and longevity. A man who abandons himself to a life of inactivity, after having always been accustomed to work, is practically dead."

Aspiration of the Bladder.

Dr. Hamaide relates some instances of impervious stricture of the urethra in which he aspirated the bladder from thirteen to eighteen times without observing any unpleasant symptoms. He cites these cases as an additional evidence of the safety of this procedure, and he maintains that aspiration is much less likely to do harm than is catherization in unskillful hands.—*Journal de Medicine de Paris*, No. 21, 1884.

Digital Dilatation of the Os Uteri During Labor.

Dr. Cleemann made some remarks on this subject at the Obstetrical Society of Philadelphia.

He had been taught not to dilate or stretch the os uteri with the finger, and for years this early teaching deterred him from making any attempt to supplement the contractile powers of the uterus by assisting in the process of dilating the os. Some time since, he was called to attend a primipara; the waters had been discharged the previous day, the pains had continued, but the os uteri was very small. and the cervical rim hard and unyielding. He felt called upon to interfere actively, and tried to dilate the os with his finger; it softened rapidly, and in half an hour was sufficiently dilated to allow the head to pass, and delivery rapidly followed. Since that occasion he has tried the same procedure on several cases, and always with gratifying results, the labors being brought to rapid terminations, where previously hours had been wasted in weary and painful waiting. The irritable condition of the os which had been lectured upon as the consequence of such interference, has not been experienced; no injury has resulted in any case. The soft finger can do no more harm, if clean, than a Barnes' or other form of dilator; and there is no danger, as in the case of the latter, of pushing the head aside and converting a vertex into a shoulder or other faulty presentations.

Dr. Cleemann would not recommend the method in every case of labor. He has resorted to it in cases where there has been early rupture of the membranes and the assistance of the bag of waters has been lost. In a recent case he saved a patient h ours of suffering, and the os was not br uised or injured in any way. The ht of any instrument causes the ient much anxiety, and the exhi- on of the Barnes' dilator, and er, syringe, etc. cause nervous ex- ment. The bags sometimes burst and thus give the patient a terrible shock, with the added discomfort of the escaping water or air. He has always carried them, but does not like to use them.—*Med. and Surg. Rep.*, July 12th.

Sciatica.

In the *Amer. Pract.*, Dr. Comingor, of Indianapolis recommends a somewhat new adaptation of an old treatment. The patient is placed under chloroform or ether; the affected limb is thoroughly flexed and extended, and made to move freely in all directions, and then at once put up in plaster of Paris, in which it is allowed to remain for a week. At the end of this time the cure should be complete. The treatment is best adapted for severe cases with contraction of the limb. It is virtually nerve-stretching without incision. With the forcible flexion we are already familiar, but not with the combination of a subsequent plaster case. We consider the method worth trying, and therefore record it.—*Edinburgh Med. Journal*, July.

Treatment of Ununited Fracture of the Tibia.

Dr. Eugene Hahn describes a new procedure employed by him with success in the treatment of pseudarthrosis of the tibia. The case was one of compound comminuted fracture, in which there had been a loss of a considerable amount of bone-substance, the two ends of the tibia being separated about three inches. Various attempts had been made to secure union without success, until it occurred to Dr. Hahn to implant the broken end of the fibula, which bone had been fractured higher up than the tibia into the medullary canal of the upper fragment of the tibia. He did so, and union took place between the two bones with the result of restoring the usefulness of the limb. The patient wore a light retention splint on the leg, and was able to walk about with ease.—*Med. Record.*

The Medical Chronicle.

A Monthly Journal for the Practitioner.

GEORGE H. ROHÉ, M. D., Editor.

☞It is requested that all literary and business communications, books for review, exchanges, etc., be addressed to, and all checks, drafts and post-office orders drawn to the order of

DR. GEORGE H. ROHÉ,

Cor. Greene & Mulberry Sts., - Balto., Md.

BALTIMORE, OCTOBER, 1884.

EDITORIAL.

The Popularization of Sanitary Knowledge.

The method of holding popular sanitary conventions for the purpose of interesting the laity in practical sanitary work, was originated by the Michigan State Board of Health several years ago, and the example followed by our own State Board last year. The Second Sanitary Council of this State was held at the Blue Mountain House on September 17 to 19. The attendance, while not large, was such as to encourage the promoters of the meeting to continue in the good work. The seed which was planted last year has already begun to bring forth fruit. There was a fair sprinkling of clergymen and prominent laymen present. The ladies, also, lent the gracious influence of their presence, and were among the most patient and seemingly interested listeners to the papers and discussions. Last year there were only thirty-three persons registered among the attendants, while at this meeting the attendance was probably three times as large.

The addresses and papers were generally of interest, although in too many cases the practical bearings of the subject were lost sight of, and the discussions assumed a too decidedly professional tendency. In the future this should be repressed by the chairman, who ought to have power to cut short a discussion when it threatens to drift into the relative merits of different plans of treatment of certain diseases. That is no part of the business of a sanitary convention to discuss. The discussions should be confined to prophylaxis, not range into the domain of therapeutics.

Probably the most strikingly practical remarks were those of Mr. Dunnett, a plumber, who illustrated by diagrams and specimens, some examples of vicious plumbing found in otherwise well-built houses in Baltimore. Mr. Dunnett showed that the regular inspection of plumbing by a qualified official is a necessity in all larger cities if good plumbing is expected.

The next session of the Council will be held on the Eastern Shore. We hope it will be characterized by equal earnestness, and anticipate a larger attendance. Our readers can help the cause by precept and example. We count confidently upon their co-operation.

The Lecture Season.

The attendance at the College of Physicians and Surgeons promises to be fully as large during the coming, as during the past session. At the time of writing, two weeks before the opening of the regular session, the students are rapidly arriving and matriculating. The clinical facilities in all the practical branches of medicine available to the students of this school are probably not surpassed, if equaled, anywhere in this country. The Alumni of the college have reason to be proud of the commanding position of their alma mater among the medical schools of the United States.

The American Public Health Association.

The forthcoming meeting of the American Public Health Association at St. Louis, on October 14-17, promise to be the largest and most instructive meeting of the Association ever held. The local committee of

arrangements, of which Dr. Joseph Spiegelhalter is chairman, and Dr. Geo. Homan, secretary, is working with a determination to make the gathering in every sense a success. A considerable reduction of fare has been obtained on all the railroads. We urge all of our readers who can to attend, confident that no one who does so, will regret the necessary expenditure of time and money. Further information will be cheerfully furnished by the committee of arrangements in St. Louis.

CURRENT LITERATURE.

Post-Nasal Catarrh and diseases of the Nose, Causing Deafness. By Edward Woakes, M. D., Illustrated. Philadelphia. P. Blakiston, Son & Co. Price $1.50.

The diseases considered in the above named book are among the most troublesome which the practitioner has to treat. Everyone knows how obstinately cases of post-nasal catarrh resist all sorts of remedies, both local and general. Dr. Woakes gives a clear exposition of the diseased conditions of the nasal and pharyngeal mucous membrane, and indicates what seem to be rational methods of treatment. The book fills a void in the special literature and will well repay careful study.

Fifth Annual Report of the State Board of Health of Illinois. Dr. Jno H. Rauch, Secretary, Springfield, Ill.

Within the covers of this bulky volume of over 600 pages, are contained a number of very valuable papers. The first of these is the work on "Medical Education and the Regulation of the Practice of Medicine," containing a brief history of the legal status of the medical profession in the different States, and of all medical colleges in America; a memoir on "The Small-pox Epidemic of 1880-82," in Illinois. Papers on "Small-pox and the Immigrant," showing the agency of the immigrant in the introduction of this disease; "Vaccination of School Children," and "The Relation of Small-pox to Vaccination."

Following these, come the "Proceeding of the Sanitary Council of the Mississippi Valley, for 1882," a brief discussion of the "Mortality Statistics" of the State, and a suggestive paper by Dr. Jno. M. Gregory, the President of the Board, on "The Sanitation of our younger cities."

Eleventh Annual Report of the State Board of Health of Michigan, for the year 1883. Dr. H. B. Baker, Secretery, Lansing, Mich.

This orgatization continues its effective work in the interest of Public Health. The volume above noted contains several interesting papers, prominent among which are the report of a committee on the "Nature of Diphtheria."

The meterological and morbility reports compiled by the Secretary are, as usual, full and valuable.

Proceedings and Addresses at a Sanitary Convention held at Ionia, Mich., Dec. 13th and 14th, 1883.

In this pamphlet of 72 pages, issued as a supplement to the report of the Michigan State Board of Health, we find a number of excellent and instructive papers on sanitary subjects The people of Michigan seem to take a more fervent interest in matters of public and private hygiene, than the inhabitants of any other State.

PAMPHLETS.

Restriction and prevention of Scarlet Fever. Restriction and Prevention of Diphtheria. Names and Addresses of Health officers in Michigan. The above papers are issued by the Michigan State Board of Health.——Concerning the Vaccination of School Children. Circular

issued by the Illinois State Board of Health.——Catalogue of the National University, 1884-1885.——Carcinoma of the Peritoneum. By I. E. Atkinson, M. D. Reprint from *Archives of Medicine*, August, 1884.——Bright's Disease of Malarial Origin, by I. E. Atkinson, M. D. Reprint from *Am. Journ. Med. Sciences*, July, 1884.——Proceedings of the Sanitary Conference of State Boards of Health, at New Orleans, June 2, 3, and 4, 1884.——Cryptorchidism, with an Illustrative Case. By Robt. W. Johnson, M. D. Reprint from *Trans. Med. and Chir. Faculty of Md.*, 1884.——Listenism in Obstetrics—shall we adopt it in General Practice? By W. H. Sharp, M. D, Volcano, W. Va. Reprint from *Trans. Med. Soc'y. of W. Va.*, 1884.——Announcement of Northwestern Medical College, St. Joseph, Mo.

FLOTSAM.

IT is said that Mr. Blaine is favorably inclined toward homœopathy.

THE class at the Woman's Medical College promises to be much larger than last season.

A RECENT local epidemic of typhoid fever at Elkton, in this state, has been traced to the use of infected milk.

THE scarlet uniform of the British army surgeon is to be changed for a less sanguinary color, namely, blue.

MR. LAWSON TAIT, the distinguished English Surgeon, is expected in this country during the month of September.

REV. HENRY WARD BEECHER is said by his physician to be suffering from "congestion of the right kidney." Fine diagnosis!

PROF. ARNOLD will deliver the introductory lecture at the College of Physicians and Surgeons, September 30, at 8 P. M.

THERE have been five importations of Asiatic cholera into this country, viz., in 1832, 1848–49, 1854, 1865–66, 1873.

THE subscription price for the *Philadelphia Medical Times* has been reduced to two dollars. It is well worth double that amount.

DR. HAMMOND'S new novel, "Lal," is said to be not nearly so fascinating as that delectable book of his published last year in "Bermingham's Library."

THE "sample mania" seems to have attacked our British cousins. It is said that wine and beer have been distributed gratuitously at the International Health Exhibition.

MODERN pathology has lost one of its leading exponents in the death of Prof. Cohnheim, who died in Leipzig, on August 14, at the comparatively early age of 45 years.

AND now a couple of Frenchmen say they have discovered the microbe of syphilis. If only M. Pasteur will cultivate it and promise protection after inoculation, his fortune is made.

DR. FOTHERGILL advises the use of the following in malaria. ℞. Acid hydrobrom., 1 drachm; simp. syr., 2 drachms; water to make 1 ounce. M. Sig.—In divided doses during an hour.

DRS. JOSEPH A. WHITE AND PAUL A. CARRINGTON, graduates of the College of Physicians and Surgeons (class of 1883) passed first and second in the last examination for admission to the U. S. Marine Hospital Service.

THE editor of the Texas *Courier-Record* is justly indignant over an article which appeared some time ago in a Philadelphia contemporary. The outraged Texan threatens the defamer of the inhabitants of his state with a coat of tar and feathers, should he venture so far South.

PARADEHYDE has recently come into use as a hypnotic. The dose is 15 minims to one dram. It should be given in some aromatic water and syrup. The amount of menstruum should be large—one to two ounces.

THE *Annals of Hygiene*, is a neatly gotten up monthly, "devoted to the fostering of preventive science and the preservation of health." It is published by Dr. Edwards, of Philadelphia, at one dollar per year.

THE transactions of the State Medical Society of West Virginia have come to hand and will receive an early notice. By the way we wonder what has become of the Transactions of the Medical and Chirurgical Faculty of Maryland.

DR. J. M. BIGELOW, Prof. Med. and Therap., Albany Medical College, Union University, Albany, N. Y., says: "I have used *Iodia* for the last three years, and it *has fully realized my expectations* as an alterative, tonic and tissue changer.

PRURITUS ani and the distressing itching of urticaria and mosquito bites can be much alleviated by local applications of menthol. It may be used by rubbing the menthol pencil lightly over the surface, or by dissolving a small amount in alcohol and bathing the part.—*Polyclinic.*

DR. SQUIBB has discontinued the manufacture of fluid extract of coca on account of the inferior quality of the coca in the market. He offers as a substitute, fluid extract of camellia (green tea) which produces the effects of coca in a greater degree. The dose is 20 to 30 mimims.

AN Encyclopedia of Medical Wit, Humor and Curiosities, is a new venture of Dr. Julius Wise, of St. Louis, formerly editor of the *Weekly Medical Review*. The author solicits contributions of available material for his work, and promises to make it full, accurate and enjoyable. Due credit will be given for original contributions.

WE have received a volume of so-called poems, entitled *Visions of Fancy*, written by N. M. Baskett, M. D., of Missouri. The author trusts his book of doggerel "to a discriminating public." We fancy a discriminating public will drop the book into merited oblivion without further comment or controversy.

A HIGHLY deserved testimonial was recently tendered by the profession of New Orleans to Dr. Schmidt, the pathologist of the Charity Hospital. It consisted of the presentation of a handsome oil portrait of the worthy doctor to the hospital, to the records of which he has added so much lustre by his scientific work.

PROF. VON PETTENKOFER, of Munich, has written an article on *Neuesten Nachrichten*, in which he shows that a bacillus or germ is not alone sufficient to explain the causation and transmission of cholera. There must be certain conditions of season and soil which favor development. These he calls the "local and time factors."

AT the recent meeting of the American Association for the advancement of Science, Dr. Sternberg stated that he had repeated Koch's experiments on the inoculation of tubercle with results confirmatory of the German investigator. Inoculation of rabbits with inorganic matter, which Dr. Forman claimed would also produce tuberculosis had not been successful in his hands.

WE have received from Dr. Chas. T. Parkes, of Chicago, his address on Surgery, delivered at the last meeting of the American Medical Association. it treats of Gun-shot Wounds of the Intestines, and gives the results of experiments made on a large number of animals to demonstrate the practicability or justifiability of operative Interference in cases of wounds of the abdomen.

The Medical Chronicle.

BALTIMORE, NOVEMBER, 1884.

ORIGINAL ARTICLES.

ARTICLE I.

INTRODUCTORY LECTURE.

By PROF. A. B. ARNOLD, M. D.

[Delivered at the opening of the regular course at the College of Physicians and Surgeons, Baltimore.]

GENTLEMEN:—

It is a pleasing sight to witness a throng of young men eager to enter upon a course of study of profound interest and of great practical importance. Medical science deals with objects of a high order, and gives laws to an art that concerns our common humanity. It seeks to solve the mysteries of the phenomena of life, and to this end investigates the remarkable chemistry of the human organism, pries into the cunning woof of animal textures, and tries to gain an insight into the variety and complexity of vital apparatus and their normal operations. From the information thus acquired, medical science extends its researches into the changes of anatomical structures, the character and order of deranged function, and the significance of symptoms, which express morbid conditions. To become acquainted with the results of such manifold and intrinsic investigations, and to learn how to utilise them in an enlightened and conscientious manner, for the relief of suffering and the restoration of health, will make great demands on your natural aptitudes and talents, and strongly appeal to your resolution to give a good amount of your time and opportunity.

Besides these requirements for obtaining a medical education, there is another worthy of your earnest thought. I refer to the training of the intellect which develops the scientific mind, strengthens the logical faculty, and facilitates the comprehension of truths. Such a discipline not only favors the acquisition of knowledge in every walk of life, but in the line of study you intend to follow it is indispensable. It leads to a habit of thinking; I might say, to an intellectual dexterity which distinguishes the accomplished and skillful physician. As the healthy and systematic exercise of the young athlete gives tone, vigor and suppleness to his muscles, so the early cultivation of the powers of observation, and of sound methods of reasoning, prepare the mind for solid intellectual work and lend steadiness and pliancy to the mental grasp. I propose, gentlemen, to touch upon a few points in relation to this subject, and to make some practical applications in reference to clinical medicine.

Science, as defined by Bain, expresses the idea of "observing, recording and explaining the facts of the world." It has been truly said that science is not in the things but in the mind. Any department of human knowledge consists of a body of facts, doctrines and propositions, which are obtained by that course of reasoning which proceeds from the known to the unknown, from the evident to the obscure, and from the simple to the complex. The powers of the mind, which are called into requisition to this end do not differ from those which are employed in the ordinary transactions of life; but the difficulty of obtaining accurate observations increases in proportion to their variety and complexity. To disentangle the involved web of occurrences, to specialise with exactness the conditions that determine and regulate them, baffle the common ways of investigation, and require improved methods.

The scientific mind encounters an infinitude of problems of which the uncultivated has no conception. To ascertain the principles that underlie apparently disconnected facts calls for patient and laborious research; constancy and perseverance in tentative efforts, a mind fruitful of suggestions and a natural disposition to find pleasure in the pursuit of knowledge for its own sake. How inadequately the unscientific man is furnished to arrive at rational explanations of phenomena beyond the limited sphere of his experience, or which occasionally excite his wonder and curiosity is amply demonstrated by the prevalence of popular errors and the crude and fanciful notions in relation to natural events. Coincidences are mistaken for uniformities; occult causes are conjured up to shed light upon strange occurrences, a plausible guess stands for proof, and one happy hit overbalances a hundred failures.

In consequence of the irresistible desire common to the day laborer as well as to the savant to know the reason of things, the most flimsy explanations are often accepted, especially when they are based on some causative agency of an imposing character. It is now the popular fashion to look upon electricity and magnetism as the common exponents of numerous inexplicable phenomena. A misplaced skepticism, the very opposite of credulity is not seldom shown, in ignorance of the steps by which remarkable scientific truths are obtained. Few persons, who are not familiar with scientific methods, can conceive the fact that the sensation of the different colors of light depends upon the definite number of vibrations of particles of matter. A very influential cause, which counteracts the best resolves to judge of things correctly, is the struggle which almost every one experiences to abandon some favorite notion or preconceived opinion. There are perhaps few persons in the world who are entirely free from bias. It is a common observation that people will only note such facts that chime in with their way of thinking—adverse facts do either not exist for them, or are considered of little value. Prof. Whewell in his History of the Inductive Sciences, mentions remarkable instances of men of even powerful and cultivated intellects whose investigations were rendered barren and resulted in errors not only for the want of clear and distinct ideas, but also an amount of some odd beliefs, which hindered a proper view of scientific questions. Keppler, the forerunner of Sir Isaac Newton, believed there could be no more than seven planets, because seven is the most perfect number.

I would next advert to the fact that the possibility of science rests upon our confidence in the constancy and stability of nature. If there were such a thing as chance in the world, all our knowledge and experience which controls our conduct in life would be vain and idle; all the teachings of science would be miserable fallacies. The balance of the chemist demonstrates the indestructibility of matter; the relationship of mechanical power, heat, electricity and magnetism proves the persistence of force, and the predictions of astronomy testify to the continuance of motion. Now, if it be asked to what is humanity indebted for the possession of these grand truths, and the proud achievements of the intellect which are embodied in the history of modern science, it must be answered that it is the adoption of the inductive method of reasoning, which means to reason from particular to the general; to infer the existence of the unobserved from the observed; to derive more general from limited laws.

I hope, gentlemen, that this excursion into a forbidding domain will not be taken amiss. I admit that a logical formula will hardly suggest a new prescriptton for measles, much less furnish materials for a poultice. But a moment's consideration will show the supreme importance of car-

rying precision and clearness into all our serious undertakings, and to obey the laws of sound reasoning, if it be at all worth while to reason. Such is the character of the intellectual outfit for original research, and I hope that future Drapers, Flints and McDowells occupy some of these benches. The same furniture of the mind is no less required by those who expect to face disease, its perplexities and disguises, who have to keep constant guard against fatal errors of judgment, and who are frequently called upon to come to a prompt decision on which the saving of life may depend.

Clinical medicine is admirably adapted by its instruction to develope the discursive faculty, and to show the way how to keep on the line of strict reasoning. It points out the manner for obtaining evidences of disease, and illustrates by actual examples the methods of recognizing and discriminating different morbid conditions and their indications of treatment. Clinical medicine comprises, therefore, diagnosis and special therapeutics. Although diagnosis is an art, and for this reason is in a great measure dependent upon tact and judgment, which are incommunicable, yet it is not so very difficult to determine the nature of the activities which enter into the composition of these natural gifts of the mind. The first in order is the power of observation. Now how to observe is a greater accomplishment than most persons are willing to admit. There are people who find it very irksome to institute a thorough examination of an object, as if they had to overcome a vast amount of mental inertia. It is plain that the strongest efforts should be made to overcome such an unhappy disposition. Then there is the casual, superficial, slovenly mode of observing, which is just as bad. To derive all the possible advantage from an observation, it must be intentional and reflective. Quickness of observation, the taking in a great number of observations in rapid succession is particularly desirable at the bed-side, for a prolonged examination is distasteful to many patients, and wastes much of the practitioner's time. Nothing, however, can excuse a careless and slipshod manner of examining patients. This is a fruitful source of diagnostic blunders and mortification to the physician. A distended bladder is mistaken for dropsy; a tumor for pregnancy; a strangulated hernia for colic and constipation; tubercular meningitis for gastric derangement; effusion into the right pleura for enlarged liver. There is nothing more fatal to the reliability of observations than prepossessions. The medical man who pronounces nearly every functional disorder of the female hysteria, is probably himself hysterical. At the present time every patient is malarial who has not a broken neck. Vividness of perception, and an aptness to recall them promptly in memory, are gifts which can be acquired by repetition and the concentration of the attention. It is, of course, a primary condition of interpreting symptoms, to be acquainted with the manifestations of healthy functions. Beginners are liable to forget this. They practice percussion and auscultation on patients before they have become conversant with the physical signs of health.

To know what to observe is, therefore, quite as necessary as to know how to observe, precisely as we must know where to look for a thing if we expect to find it. To recognise the direction which an inquiry must take is the first step in a successful research. Of two travellers who intend to visit a foreign country, the one who is stocked with considerable knowledge of mineralogy, botany, the manufactures, the arts and general literature, is immeasurably better equipped to gather useful information than the other, who lacks these accomplishments. In like manner the examination of a patient is worthless if you put random questions, and have but a confused idea of diagnostic points

It makes little difference what system you choose in your examinations, but some system is necessary or you flounder most pitifully. In serious diseases of a chronic nature, examination should be thorough; every important organ should undergo a severe scrutiny, and even slight deviations are deserving of notice.

The so called "leading questions" amount to very little. Suppose you find a patient in fever. He will answer with a monotonous "yes" the inquiries, whether he has headache, feels weak, is tired, restless, drowsy, has a bad taste in the mouth, an indifferent appetite, sleeps poorly and so forth. But now observe the patient more closely. The accelerated pulse, joined with quick breathing, arrests your attention, and promises to give you more definite information. It strikes you that there is a decided disproportion between the pulse and respiration ratio. If you are aware what this symptom signifies, the existence of pneumonia will at once suggest itself, and, on auscultation, you will probably discover a fine crepitus or faint bronchial breathing in some portion of the lung. Being now on the right track, you are prepared to look for other well-known symptoms, which will either confirm or correct your diagnosis. Should your patient be a very young child or a person advanced in years, you will have to rely mainly on the fact of the abnormal pulse and respiration ratio, if you arecalled early to see the case.

This illustration points to another step in diagnosis, after all the information that could possibly be gathered has been obtained. To transform symptoms into signs of disease is the most difficult task of the clinician. Symptoms are of diagnostic importance only, when they divulge the precise situation and character of the lesion, or at least the organ that is affected; and when this is not attainable, afford some insight into the state of the case, so as to suggest an appropriate course of treatment. To this end it is requisite to understand the relationship which exists between certain abnormal states and their corresponding outward manifestations. This supposes a commemorative knowledge of groups of symptoms that evidence the existence of definite morbid conditions. The student acquires this knowledge from medical instruction. Around this nucleus his future experience accumulates, but in order to profit by his experience, he must employ the same methods that led to the acquisition of the knowledge he has previously appropriated to himself; and this is the more necessary, as he will be constantly thrown upon his own resources at the bed-side and the consultation room. He will then fully appreciate the value of science which confers the power of applying to one object the knowledge acquired from another. Having already mastered a large number of facts, their remote connections and interdependence, he is prepared to apply the principle of inductive reasoning wherever it is possible. In proportion that he has habituated himself to reflect on the agreement or identity of facts that come under his observation, and in proportion to the acuteness he has acquired to discover resemblances and to suggest explanations, in the same proportion obscurities will clear up, and enable him to work out a rational course of therapeutics. This brings me to the subject of theory.

There is a class of so called practical men who will have nothing to do with theory. Facts are what they want—facts. Why, gentlemen, you cannot prescribe a common cathartic pill or a simple cough mixture without dabbling in some theory. What does theory mean? In its proper acceptation, says Stuart Mill, "it means the completed result of philosophical induction from experience," and he adds, "it constitutes the highest worth that a principle for the guidance of practice can possess." Theory, in its vulgar sense, implies "any

fiction of the imagination which conceives how a thing may have been produced, without examining how it has been produced." There are sound theories and erroneous theories, just as there is good sense and nonsense. Do away with theory, and medicine is reduced to a crude empiricism. Every explanation of phenomena constitutes a theory, and because pathology affords explanations of the nature of diseases it is properly called the theory of medicine. Medical theories, in short, reflect the state of perfection of pathological knowledge.

We are sometimes tauntingly told that medical science is "very progressive," which is a fling at the fluctuations of medical theories and opinions. But medicine embraces theories which are as well sustained by facts as theories in other departments of science. The progressive tendency of all sciences is their boast and glory. There is only one thing in the world which is not progressive, and that is an idiot. It is true the recondite nature of the phenomena, with which medicine deals, gives little scope for arriving at complete inductions; we are therefore continually thrown back on the balancing of probabilities. But as Prof. Jevons has well said: "probability is the necessary basis of nearly all our judgments and decisions we make in the prosecution of science, or the conduct of ordinary affairs." The degree of probability is or ought to be the measure of belief. Sensible people constantly illustrate in practice the truth of this proposition in little and in big things. My neighbor prefers to bet on a horse that has a good record and many good points. The whole scientific world elevated Newton's theory of the force of gravitation to a law of nature, because it possesses the highest degree of probability. Diagnosis is neither more nor less than a calculation of probabilities. Let us illustrate this truth by citing a case of sickness in which an intense pain of the chest forms the most prominent symptom. It may mean pneumonia, pleurisy, neuralgia, muscular rheumatism, aneurism, a mediastinal tumor or a syphilitic thoracic gland. Suppose the physician locates the pain in the upper part of the chest, where he detects, on percussion, a circumscribed area of dullness. Continuing his careful examination, on applying his hand to the painful spot he experiences a soft pulsatile sensation, and he further notices stridulous inspiration. He begins to suspect the existence of an aortic aneurism, and probably his suspicion is correct. He would be unwarranted to give a positive opinion until the case has more fully developed, for there is some probability that the symptoms may be due to an intrathoracic tumor, which exerts a pressure on one of the large arteries. The difficulties encountered in the application of the laws of probability increase in proportion to the number and complexity of the factors, and in proportion to the variability of their interaction. I need not tell you that the subjects proper to medical science bear this character in an eminent degree. But in practice, as in other concerns in life, it would be as foolish to wait for the attainment of absolute certainty as to wait on the banks of a river until all the water had passed.

One of the strongest tendencies of the human mind is to reason from analogy. Our primitive ancestors, who worshiped stocks and stones, came to their belief precisely by the same method of reasoning that scientific men of the present day adopt, though with far greater caution and skill. At first sight it seems a hazardous way of reasoning, to infer from a few resemblances presented by different objects an agreement that lies deeper than it appears, and for all that, some of the grandest discoveries in science emanated from this species of argumentation. We need not go out of the way for illustrations, as medcal science furnishes many examples. For instance, the modern theory of fe-

ver was suggested by the resemblance of its clinical history to the action of a specific poison. On carrying the analogy further, in regard to the resemblance of the action of fever poisons to the behavior of low organisms which have found a fruitful soil, the hypothesis of a "living miasm" or a "contagium vivum" began to be entertained. Then, again, the identity of many febrile symptoms with nervous disturbances led to the inference that the immediate effect of the fever poison results in a neurosis. The wide range which is assigned to the therapeutical effects of many of our remedies is in compliance with analogical argument, rather than with the teachings of experience. Thus, ergot was originally introduced into practice on account of its decided action on the pregnant uterus. On the supposition that the physiological effect of this drug is due to its property of exciting contractions of unstriated muscular fibres, it was inferred by a parity of reasoning that this remedy would prove beneficial in affections which are marked by a relaxed or inactive condition of such muscular fibres. Ergot is now recommended and often successfully employed in the treatment of hemorrhages, phthisical hemoptysis, bleeding piles, paralysis of the bladder, hemicrania and other disorders. The weakness of analogy on the other hand is evident from the frequent failures of hypothesis which are based on hasty generalisations. Popular fallacies of the past, and new ones that continually crop out, either result from faint analogies which are strained beyond all reason, or they betray a fondness for fantastical notions of an attractive character. Still, the formation of hypothesis is indispensible to scientific research. Whenever phenomena present themselves to the contemplative mind which are disconnected or inexplicable on known principles, any hypothesis is better than none, if only to stimulate inquiry. A hypothesis is but a temporary assumption of the truth of a proposition which declares the cause of a body of natural events. Its truth is proved or refuted by its deductions. It is a weak hypothesis when it only covers a few of the material facts; it is a strong hypothesis when it covers many of these facts, and if all the facts of the particular case, without exception, conform to the consequences that logically flow from the proposition implied in the hypothesis, then it acquires the value of a true theory. A hypothesis is, therefore, not a figment of the imagination, but a tentative effort—the preliminary step in the quest of scientific truth. The first condition of a legitimate hypothesis demands that the proposed cause from which a certain body of facts is to be inferred must be suggested by the nature of any of these facts; an outside, occult or fancied principle is inadmissible. The history of the rival hypothesis in optics is exceedingly interesting and instructive. Both the emission and the undulatory hypothesis explained a number of the phenomena of light. For a long time it remained undecided which of them is the superior. At last the undulatory theory proved victorious, for in the language of an eminent author: "it accounts for, explains, simplifies the most entangled cases; corrects known laws and facts; predicts and uncloses unknown ones; becomes the guide of its former teacher—observation; and enlightened by mechanical conceptions, acquires an insight which pierces through shape and color to force and cause."

Classification is another term denoting the recognition of similarities. When we classify objects we generalise; we mean that they possess many qualities in common; hence every common name implies a classification, and conveys the knowledge of a large number of affiliated facts. For example, the word "vertebrata" expresses a whole chapter of related facts. It characterises animals of a bilateral type, having an internal

skeleton, whose axis is composed of rings that enclose the nerve centres, etc., etc. The great advantage of classification consists in the facility of systematising our acquired knowledge. We continually classify the ordinary experiences of life. The classifications in science are only distinguished by their depth and scope.

Their are many ways of classifying objects, for objects resemble and are related to each other in many ways. It is, however, clear that a classification which is based on the intrinsic properties or permanent features of objects is the most perfect, and for this reason a science which admits of such a principle of classification shows a high state of perfection. A classification of this character would be a natural one in contra-distinction to an artificial classification, which latter is based on some superficial resemblances, like the old Linnean system of botany. Many attempts were made from time to time in medical science to establish a natural classification of diseases, but with indifferent success. Diseases may be classified in correspondence with their morbid anatomy, or their etiology, or their symptomatology. It would be exceedingly desirable if either morbid anatomy or etiology were available for the construction of a satisfactory system of nosology. This is, however, impracticable at present, and probably yet for a long time to come. The distinctive anatomical changes of a large number of important diseases are far from being determined, and etiology is the most obscure chapter in medicine. A cursory review of the current nomenclature of diseases will disclose this fact. Thus, cerebral hemorrhage and peritonitis are names expressive of pathological changes; syphilis and malarial fever signify causative agencies; epilepsy and insanity imply conspicuous symptoms. For practical purposes it makes little difference how diseases are named. We are told that we must treat the patient, and not the name of the disease. But most of the smart sayings, this being one of them, are only partly true. It is unquestionably true that diseases are materially influenced by the age, sex, occupation, family history and other personal peculiarities of a patient, and that treatment must be modified accordingly. On the other side, there must of necessity exist a decided similarity in the pathology and symptomatology of diseases dependent upon identical causes. It is just here, where generalisation comes to our aid, not only to enable us to apply the knowledge we have previously derived from the observation and study of a large number of similar cases, but we are also enabled to extend our knowledge beyond our experience—we can anticipate and predict. Newton's theory of gravitation is a large generalisation, though it only relates to the laws of motion that reign among a few planetary bodies. It has, however, received a wide extension on the reasonable supposition that it includes millions of stars; in short, that it expresses an universal law. Hershel's discovery of double stars, which appear to obey the law of gravitation, is a beautiful illustration of the fruitfulness of the generalising method. The phenomenon of aphasia led to the discovery of a "speech centre" in the brain. This encouraged the attempt to localise other functions of the brain, and this again led to the results of the remarkable experiments of Hitzig, Fritsch and Ferrier.

The brief analysis which I endeavored to give of induction, analogy, theory, hypothesis, classification and generalisation has no doubt impressed you with the conviction that they are but different phases of one and the same fundamental principle of reasoning, and that this is nothing else than the apprehension of similarities and differences among objects or phenomena. In our highest flights of philosophising we deal with comparison and inference. Observations which stand isolated, which cannot be grouped

among others or subordinated to some known principle, are usually called empirical facts. Such facts, which cannot be explained by any theory, abound in every branch of science. Even mathematics proposes problems which cannot be solved. Chemistry swarms with inexplicable facts. Many animal substances cannot be shown to obey even the laws of combining proportions. The name of disconnected facts in physiology is legion; and lastly, in therapeutics, nearly every drug is a law to itself. The perfection of a science is therefore in inverse proportion to the number of empirical facts it contains.

Whilst discussing these matters, which have a bearing on the way and manner of acquiring knowledge, I am tempted to allude to an aphorism of Bacon, which says that "reading makes a learned man, writing an exact man, conversation a ready man." On applying this wise saying to meet the case of a beginner in medicine, it should be observed that the reading does not refer to the study of books that treat of subjects proper to his profession, for that he should read them goes without saying. What is usually called "learning" is a scholarly acquaintance with the literature of a great variety of subjects. This is an accomplishment which is more showy than useful. It has come to pass, however, that a physician is expected to be conversant with many things that have but an indirect bearing on his professional knowledge and, certainly he should not be found in the rear of that constantly increasing class of people, who are ambitious to share with others the high culture of the present day.

Respecting the influence which the habit of preparing written statements exercises on orderly thinking, this is evident from the pains that most people take when requested to put their thoughts on paper. Every one dreads to be taken for a Dogberry. There is, in fact. no better gauge of estimating a person's capacity for sustaining a consecutive train of ideas, on any subject requiring some reflection, than his written account of the matter. Spoken words are apt to be slippery, at least they can only be caught on the wing, but written language can be held fast and thoroughly scrutinised. In writing we practice a wholesome self criticism; we are coerced into method. I would urge upon students the great advantage of "case taking." This can be conveniently done after clinics, and at suitable hours when "walking the hospital." The only rule that I have time at present to give them is not to mistake inference for fact. If, for instance, you hear a murmur over the left apex of the heart, do not put it down as a mitral insufficiency, but plainly state what you have discovered.

Conversational power, like learning, is also a desirable accomplishment. A ready command of language, and even the gift of small talk, as the world goes, constitute not the least elements that help the reputation of a practitioner. It is said of an eminent London physician, who enjoys the most lucrative practice in aristocratic circles, that he is noted for his fine address in managing hysterical patients. But this is not the meaning of Bacon's sententious remark. He evidently wishes to indicate that conversation cultivates the art of communicating thoughts with promptness and effect. Medical men are not especially distinguished for excelling in ready speech. Members of the legal fraternity, who frequently have occasion to judge of this kind of performance in examining witnesses and experts, often draw amusement from the verbal awkwardness of their medical brethren. I think that young men might easily overcome a failing in that direction if they would attend quizzes, and subsequently take an active part in local medical associations. Good sense will teach them to avoid an exuberance of technicalities where they are out of place. The

best means, after all, for learning how to speak to the point, is to lay in a good stock of well-digested knowledge. It is a saying as old as Aristotle, that any one can speak well on a subject which he understands.

In conclusion, I would like to add a few words on the subject of "authority" in the domain of science. Strictly speaking, authority, in the sense of a personal claim to dictate belief, is not acknowledged in science. Every scientific doctrine must stand upon its own merits. It cannot appeal to a higher sanction than proof or demonstration. Respect is always due to the statements of any disinterested observer, and when he is credited with capacity, and enjoys special facilities of making accurate observations, no one would hesitate to attach a high degree of authority to his recorded experience. But it should never be forgotten that established facts, well-grounded theories, and the uniform teachings of experience, vindicate their own authority. Obedience to the true methods of interrogating nature is the first condition to learn her ways, and to make her serviceable to man, in the same manner as submission to the immutable laws of virtue and of duty, is the only safe rule of conduct. The consciousness of these principles of our intellectual and moral being, evokes the thought that "we are working under the guidance of a Higher Power."

ARTICLE II.

CREMATION.

By W. N. HILL, M. D.

[Read before the Medical and Surgical Society of Baltimore, October 8, 1884.]

The disposal of the dead is a subject which has interested thoughtful men in all ages of the world, and has recently been brought into prominence by the discussion of cremation as a substitute for the prevailing custom of burial. The objectionable features of cremation belong entirely to theology, and to the superstitious veneration of a custom prevalent among the people Its advantages are manifold, and will undoubtedly present themselves forcibly to future generations.

From a sanitary point of view, cremation appeals to every intelligent person in a striking manner. The cemeteries of London became such nuisances that intramural burial had to be prohibited more than twenty years ago. The soil in these cemeteries in the poorer districts was raised 3 to 4 feet in a few years by the accumulated products of decomposition. Beside the contaminations of air and water in the immediate neighborhood of burial grounds, accidents have occurred from the carbonic acid gas given off in them during decomposition, breaking into the cellars of adjoining buildings. This occurred several times in the vicinity of the cemetery of the Innocents at Paris.

The contamination of drinking water in springs, whose course is through a cemetery, has been shown to be the cause of renewed outbreaks of infection in yellow fever. The possibility of such a thing suggests itself to every one. While discussing this point, which does not interest us as city people to a great extent, from the fact that our water supply is not received from springs, I would like to call attention to the fact that a well from which people drink is now located on the sidewalk near the wall of Greenmount. A similar state of affairs exists near one other cemetery at least, on the Philadelphia road, within the city limits. Though without positive evidence at present that these wells are contaminated, no such source of possible disease should be allowed to exist any longer.

The fact that persons have occasionally presented all the ordinary signs of death and afterwards revived, and that others have undoubtedly been buried alive, draws attention to cremation as a means to prevent any such catastrophe. The possibility of

being buried alive in a state of unconsciousness, and reviving after being in the grave, presents the most horrible picture the imagination can conceive. Cremation presents a remedy for this without the shadow of a doubt.

In discussing the subject, the advocates of the existing order of things have been reduced to the extremity of using such absurd arguments, that if it were not for the doleful character of the subject under discussion, one would think they were trying to perpetrate a joke. As an economic measure, it is seriously advanced by them, that in cemeteries we are laying up a large and valuable supply of fertilising materials, which will partake of the nature of a bank, from which our successors will reap a harvest in the increased fertility of their lands. Though this point has an element of the ludicrous about it, several important thoughts are suggested from it. In a so-called natural fertiliser factory, a cemetery, the process is carried on slowly, much time being consumed in the slow process of decay, the germs of disease of which the person died, if of a contageous character, undoubtedly remain at least on the surface of the body or in the clothing in which the corpse is wrapped, contaminating the soil and issuing into the atmosphere, deal death among the living. I have seen an instance of this in the marked virulence of small-pox in a neighborhood, the ground of which was formerly used for a cemetery for a small-pox hospital. The germs of no disease, in fact no organic body can stand the continued heat of a furnace at 2,500 or 3,000° Far.

If we look at the subject for a moment, from the standpoint of the economic writers above referred to, we see how much they are behind the age. This is, if anything, a fast age. Cemeteries, in comparison with cremation, may be likened to the old-fashioned farmer's manure pile, and burning the modern scientific fertilising factory. The organic and mineral components of the body are reduced to their proximate elements in a few hours in the heat of a cremation furnace, the result being a few pounds of earthy salts, the most of which are readily assimilated by plants, and are excellent fertilsiers. The gases formed during the process are diffused through the atmosphere in such a manner as to do no harm, in accordance with the well-known law of diffusion of gases. In fact, a furnace has been devised by which there is not a particle of odor, the gases given off by the body during incineration being reduced to a condition in which they are perfectly innocuous.

The cost of a Siemens' furnace, which is capable of reducing two hundred pounds of animal tissue to white ashes, without sound or smell, in the space of an hour and a half, at a cost of 75 cents for fuel, is estimated at $1,250.

The published account of the incineration of the remains of the wife of a German physician is as follows: "The hall around the furnace was decorated with flowers, and in every other respect the solemnity which should attend so serious a rite was duly observed. The process of cremation was screened from the eyes of the lady's friends by an iron door. There was no smoke nor any unsightly transformation of the body. When the coffin was consumed the body appeared in its natural state, then red hot, and at last appeared to be of translucent white. From this it crumbled into ashes. Up to the period of its entire consumption by the flames, the process was merely a rapid drying up. After 78 minutes all organic matter was gone, and nothing remained but a small heap of ashes, which was conveyed away in an urn."

Sir Henry Thompson, who is an enthusiastic cremationist, computes that the 80,430 persons who died in London in 1871 would furnish about

206,820 lbs. of ashes and bone earth, equivalent to 6 or 7 times its weight of dried and unburned bones as they ordinarily exist in commerce, and that utilisation of this for fertilising purposes would save a large annual outlay for the importation of bone ash into Great Britain. In this country we import bone ash from South America.

In case of war, the advantages of cremation for disposing of large numbers of dead after a battle are manifest. During the seige of Metz 8,400 bodies were packed, like herrings in a box, in a pit four rows deep, with the heads placed in an opposite direction in alternate rows. A furnace would have done away with the necessity of this shocking spectacle. Near Sedan, straw mixed with pitch was used to burn bodies which had only been superficially buried. One ton of pitch sufficed for from 15 to 20 bodies. The experiments were only partially successful, owing to the imperfect manner of procedure.

In conclusion, I may be allowed to prophesy, that in the next great war the world sees, among the *impedimenta* of the armies will be found "an ambulatory cremation furnace," and furthermore, that owing to the growth of enlightened public opinion on this subject, before the end of the century every town which has any pretence to be called a city will be supplied with its local crematorium.

ANALECTS.

Treatment of Dysentery With Bismuth Per Rectum.

Inflammation of the lower portion of the colon, attended with bloody and mucous discharges, tenesmus, frequent desire to stool, and oftentimes with prolapse of the rectum may be modified and its course often quickly abridged by the use of bismuth per rectum. Other treatment has always been unsatisfactory in my hands, the cases progressing slowly and often requiring two or three weeks to overcome. I recall one case where it required six weeks, although the usual treatment advised by our best authors was closely followed.

Knowing the good effect of bismuth when administered per orem in the various diseases of the gastro-intestinal tract, and observing the beneficial effect of this remedy when applied locally to abraded surfaces, I was led to believe that it would be equally efficacious in inflammation of the rectum when applied directly to the inflamed surface. This method of treatment has been highly successful, and I feel justified in advising others to adopt it. In very severe cases, opium in some form, preferably the tincture, may be added with benefit.

From ten to twenty grains of bismuth are administered with mucilage of acacia and water after every evacuation, and if not sufficient in itself to control the frequent stools a little laudanum is added. Recently a child suffering from a severe attack of dysentery, with prolapse of the rectum with every passage, was almost immediately relieved. Within twenty-four hours the character of the passages was entirely changed, the tenesmus and frequent desire to stool relieved, and the prolapse not recurring after the second or third administration. This is only one of many cases where this remedy has been used with gratifying result.—*Arch. Pediatrics.*

Tubercular Meningitis Treated by Phosphorus.

In four cases of tubercular meningitis, all were cured by taking two to four minims of Fauconnet's syrup (a French preparation) in a dram of simple syrup, every four hours. One of these cases had, in addition, chronic hydrocephalus. The head became smaller with improvement in the meningitis. One case convalesced in three weeks, another in eleven days.—*Arch. Ped.*

Treatment of Pnuemonia.

Dr. I. Burney Yeo, Physician to King's College Hospital made pneumonia the subject of a recent address before the Birmingham and Midland Counties branch of the British Medical Association. His remarks on the treatment of the disease are particularly interesting. He declares himself to be what in political language is called "an opportunist" in the treatment. He believes in no special treatment, but trusts to rational, common-sense management of individual cases.

There are certain circumstances, certain accidents of the disease, which require careful consideration. These are, first, excessive dyspnœa from overwhelming pulmonary hyperemia and edema, in addition to the consolidation. He regards this condition as the only one which calls for bleeding in pneumonia, and its occurrence is exceedingly rare. Second, excessive pyrexia attended by delirium and danger of rapid cardiac exhaustion. Here the cautious application of cold to the surface (not in oversensitive organisations, which, he believes, to bear this treatment badly), may be used with benefit, as advocated by Jurgensen. The cases however, which should be thus treated, should be carefully selected. He also thinks that quinine is too little used in pneumonia as antipyretic. Sulphurous acid exercises a reducing influence on the fever, and quinine combined with sulphurous acid merits more frequent use for this purpose. In low typhoid forms of pneumonia the medicine should be given from the commencement of the disease. Third, pain in the side; for this symptom, which should by all means be relieved, Dr. Yeo relies on opium, giving preference to Dover's powder as the form in which it should be administered. A few leeches over the seat of pain is also a valuable expedient. Fourth, the tendency to cardiac exhaustion, with sleeplessness and delirium. In these, the so-called typhoid symptoms, the free use of alcoholic stimulants is essential. Many cases of pneumonia require no alcohol, while many others cannot be kept alive by any other means.

Dr. Yeo takes occasion to warn his readers of the danger attaching to the so-called abortive treatment of pneumonia, by means of aconite. He has no faith in the abortion of pneumonia by this means While it is a valuable drug it should be administered only as its use is called for by well defined symptoms, and it should never be "pushed."—*Analectic.*

Asphyxia—Electricity.

C. H. Huxtable, M. D., M. Ch., writes:

Two months ago I was in attendance upon a woman in confinement. At the termination of the labor the child was born apparently lifeless, and for twenty-five minutes failed to make a single inspiration, although artificial respiration and other means were used to restore animation. In the meantime I sent to my home for my electric battery, and immediately on applying the induced current to the chest and back I had the satisfaction of seeing muscular contraction take place in the muscles of the chest wall, and very soon the circulation was re-established and breathing became regular. The child lived for two days, and then died of cyanosis. Considering that the suspension of animation resulted from failure of the heart's action, and that the blood was still possessed of vitality, I hoped that by starting the heart into action and driving onward the blood I might bring back the child to animation. The event proved that there was sufficient muscular irritability in the heart to allow of the efficient use of electricity. This case seems to show that in cases of suspended animation, such as drowning, we may assist the use of artificial respiration by employing eleetricity more frequently than is generally done.—*London Lancet.*

Uremic Amaurosis.

Dr. A. Friedenwald thus summarizes a paper on this subject:

1. That when amaurosis suddenly overwhelms a patient in both eyes with no ophthalmoscopic change, uremia should be suspected, even in the absence of any other prominent uremic symptom.

2. That uremic amaurosis will continue only as long as the uremia exists, and will disappear when the function of the kidney is re-established. When permanent injury to sight is observed, it may be due to pre-existing retinal changes, not at all uncommon in Bright's disease.

3. That the chances for a full return of sight are somewhat impaired when the patient has been the subject of recurring attacks.

4. That by exhibiting jaborandi and other means for inducing free diaphoresis and by free purgation a catastrophe may be averted in the general forms of uremia, but when it occurs in pregnancy, premature labor is the only remedy which promises safety to the patient.—*Analectic.*

Essentials for the Safe Administration of Ether.

Dr. David W. Cheever concludes an article on the administration of ether in the *Boston Med. and Surg. Jour.*, by giving the following essentials for its safe use:

An empty stomach.

A loose neck.

A free abdomen; no corsets or skirt bands.

Removal of artificial teeth.

An easy, semi-recumbent position.

A sponge wrapped in towels for the ether.

A gag and forceps for the tongue.

When stertor occurs, the patient should be tipped forward, the cheek opened with two fingers, the tongue drawn out, the fauces swabbed. To *insure* safety, the surgeon should hear every respiration of the patient.

Anesthesia from sulphuric ether is of two forms:

1. Primary anesthesia, which is a moment of confusion coming on after a very few inspirations. At this moment a felon can be opened without pain, and the patient wake at once.

2. Comatose anesthesia, for prolonged operations. Ether *may* be given almost indefinitely. To relieve the hopeless agony of tetanus, I have had it administered for twenty-four hours.

If you would avoid asphyxia, nausea, and headache, and be *safe*, use only the best and the purest anhydrous sulphuric ether.

Vaccino-Syphilis Experiments.

With a desire to settle for himself the vexed question, whether vaccine lymph taken from a syphilitic person, if unmixed with the blood of the vaccinifer, does not contain syphilitic virus, and is incapable of imparting syphilis by its inoculation? Dr. Cory made, at intervals, four separate experiments upon himself, with lymph derived from obviously syphilitic children. The last experiment was successful, and Dr. C. had to endure all the pains and penalties of syphilitic inoculation. The committee appointed to investigate Dr. C.'s experiments, consisting of Drs. Bristowe, Humphrey, Ballard, and Mr. Hutchinson, report that it is possible for syphilis to be communicated in vaccination from a vaccine vesicle on a syphilitic person, notwithstanding that the operation be performed with the utmost care to avoid the admixture of blood.—*Brit. Med. Jour.*

Ovariotomy at Three Months of Age.

A child, three months old, was noticed to have a swelling in the inguinal region. Six days after the swelling had been noticed it was operated upon, and found to be the ovary and fallopian tube; both were removed. In sixteen days the child left the hospital, the wound having healed by first intention.—*Arch. Ped.*

Obstetrical Forceps.

Dr. T. Griswold Comstock directs before any attempt is made to apply the forceps, the membranes must have been ruptured. Secondly, the os uteri should be fully dilated, and the cervix well retracted over the child's head; also, the bladder should be evacuated by the catheter, and if necessary, an enema of warm water and glycerine (equal parts) be given, to unload the bowels; then, the practitioner should once more examine the woman by the *touch*, and satisfy himself as to the exact position of the child's head.

It is the experience of obstetrists, that many cases of protracted labor which have been regarded as proper for the use of instruments, have been "converted into an active labor," that is to say, terminated in speedy delivery after passing the catheter and evacuating an overdistended bladder. *This precaution in midwifery practice*, to evacuate the bladder, *should never be forgotten*, and sometimes as a result, the delivery will be completed before we have time to apply the forceps.—*St. Louis Periscope.* [A very sensible homœopathist.—ED CHRON.]

Borocitrate of Magnesia as a Solvent of Urinary Calculi.

Dr. N. Perez (*Boletin de Ciencias Medicas*, Mexico) refers to the case of a boy, four years old, having a large calculus in his bladder. Before performing an operation he tried the application of the borocitrate of magnesia, of which he gave fifteen grains dissolved in one ounce of syrup, one to three tablespoonfuls every day. After three days of this treatment a good deal of white sediment appeared among the mucus in the urine, which continued about one month, the other phenomena disappearing, so as to cause belief in the recovery of the boy.

In consequence of this result the doctor proposed the same treatment in another boy having a large calculus in his bladder, for which an operation was contemplated. One month of this treatment was given, the urine during this time having a yellowish sediment. At one time he was called on account of severe symptoms of incomplete obstruction of the urethra near the glands. The doctor perceived something hard, which was really a foreign body in the urethra. He removed it with the forceps and it was found to be a small calculus. A slight urethritis followed after every symptom disappeared.

In both cases there is no doubt but that the calculi were composed of different salts, as the sediments were of different color, which shows that the medicine acted on both in the same way.

The formula of the remedy is: ℞ Carbonate of Magnesia, 15 gr.; acid, citric, borate of soda, aa ʒss; aq. fervent q. s. ut solvatur.

This solution is spread on a glass for evaporation, obtaining in this way a salt in laminæ, which is the borocitrate of magnesia and soda.

This salt was claimed to be a good dissolvent of the urinary calculi by Becker, and Madsen made comparative experiments with the benzoate of lithium, demonstrating the superiority of the borocitrate of magnesia.—*Cin. Lancet and Clinic.*

The Internal Administration of Chrysarobin (Chrysophanic Acid) in Skin Diseases.

Dr. Stocquart has used chrysarobin in 61 cases of skin disease with excellent results; of 32 cases of eczema, 30 were cured; of 5 cases of psoriasis, 3 were cured and 2 improved. Cases of ecthyma, impetigo, and acne also yielded to this treatment The drug was usually given suspended in water, the average dose being about one-sixth grain per diem for children, and one-half grain for adults. Diarrhœa, nausea, and vomiting were brought on when large doses were used. The drug was also given hypodermically.—*Phil. Med. Times.*

Poisoning from Veratrum Viride.

William M., white, æt. 38 years, admitted to the Philadelphia Hospital April 27, 1883. Symptoms of commencing typhoid fever were present, and the patient ran the usual course of the disease, convalescence setting in on the twenty-second day. On the evening of the second day of his convalescence, or twenty-three days after his admission, the poison was administered through a mistake of one of the attendants of the ward.

It was nearly ten minutes after the ingestion of a teaspoonful of the officinal tincture of veratrum viride that the patient was first seen by the writer, and up to that time the drug had failed to produce any nausea or vomiting, as is usually the case when overdoses of this poison have been taken, this prompt emesis which it usually produces being the probable explanation of its lethal inactivity, for, in the act of vomiting, the medicine is ejected with the first matter from the stomach.

Very great depression of the powers of life was observed, the action of the heart exceedingly weak and feeble, the pulse almost indistinguishable, the surface of the body cold and covered with a clammy sweat, and the temperature reduced below normal about one degree. The globes of the eyes were prominent, lending a peculiar staring appearance to his countenance, and the pupils decidedly contracted. The patient experienced some dyspnœa, and the respirations were shallow and labored.

He was restless, and the countenance bore an anxious expression; the delirium, which had almost subsided before the administration of the drug, returned with renewed vigor. It was of a low, muttering character, and continued so for some twelve hours after the administration of the poison, when it was replaced by a condition of semi-stupor, which abated but little up to the time of his death. No numbness or tingling was complained of, and tactile impressions, though not entirely absent, were very faint.

Measures were immediately taken to remove from the stomach any portion of the poison which it might contain. Mustard water, followed by a well-diluted solution of about thirty grains of the sulphate of copper, was administered, and in a short time free vomiting was produced. The stomach-pump was then resorted to, and the stomach thoroughly washed.

Under the use of artificial heat, brandy both by the stomach and rectum, and ammonia, in a few hours the respiration became less embarrassed and shallow, the pulse became fuller and stronger, the anxious expression of the countenance lessened, and a condition of general physical quiescence ensued.

The action of the heart, however, never entirely recovered its strength, and the number of pulsations per minute reached fifty-two as the maximum, some six hours prior to his death.

On post-mortem examination, the thoracic viscera were found in a normal condition, except a slight increase in the pericardial fluid.

The stomach was almost empty, and its mucous membrane showed unmistakable evidences of acute gastritis, the inflammation, however, not being generally spread over its entire surface, but appearing in spots, the congestion gradually lessening into the surrounding healthy tissue.

The intestines exhibited the usual ulcerations of Peyer's patches, but no point of perforation could be distinguished.

The patient undoubtedly recovered from the poisonous effect of the drug, but the depression of the vital powers which its ingestion caused, when superadded to the already prostrated condition in which the fever had left him, undoubtedly produced the fatal termination.—*Phil. Med. Times.*

DIPHTHERIA prevails to an unusual extent in Canada.

Is Phthisis Contagious?

Dr. C. T. Williams (*Brit. Med. Jour.*), from his very extensive experience, concludes:

1. The evidence of large institutions for the treatment of consumption, such as the Brompton Hospital, directly negatives any idea of consumption being a distinctly infective disease, like a zymotic fever. 2. Phthisis is not, in the ordinary sense of the word, an infectious disease, the opportunities for contagion being most numerous, while the examples of its action are exceedingly rare. 3. In the rare instances of contagion through inhalation, the conditions appear to have been, first, close intimacy with the patient, such as sleeping in the same bed or room; second, activity of the tubercular process, either in the way of tuberculosis or excavation; third, neglect of proper ventilation of the room. 4. In addition to the above, a husband may, though he rarely does so, infect his wife by coition, and this risk is considerably increased in the event of pregnancy. 5. By the adoption of proper hygienic measures, as good ventilation and separation of consumptive people from the healthy at night, all danger of infection can easily be obviated.—*Miss. Valley Med. Monthly.*

Gynecial Uses of Hot Water.

R. H. Gunning, M. D., F. R. S. E., read before the Medico-Chirurgical Society, of Edinburg, May 7, 1884, a paper on "some points of importance in medical practice," from which we select the following:

Ladies suffering agonies in menstruation are better relieved and cured by very hot hemicupia than anything else. Of course, complications must be attended to at the same time. The bowels need attention, or a weak circulation or cold extremities may need a hot stimulant—hot punch—but such complications being attended to, a hot hip bath is the surest means of relieving pain. And not only in painful menstruation, but when defective or in excess. Used for successive periods, the first is increased, the second is diminished. In acute leucorrhœa, or irritated rectum, in the tenesmus of diarrhœa, besides the hip bath, hot water—simple or medicated with opium—can be injected into the passage. I even use a very warm hip bath after labor, when the lochia are excessive and the patient is feverish. In this way ablution is effective, the parts are soothed, and a source of puerperal fever—especially in warm climates—is removed. I have the patient carefully lifted and set down in a plentiful and very hot hip bath. A recent illustration of the use of hot water occurred to me in Italy. A lady's absenee from the table d'hote was daily regretted by her husband and friends, and medicines were doing her little good. I found she had had an abortion about a month back, and that the hectic and lassitude were due to the painful post partum discharge. I advised her to sit down at once and again and again in very hot water, and also to inject it plentifully. She was soon relieved, and on the second day was at table and out everywhere, quite well.—*Edinburg Med. Jour.*

Contra-Indications in the Use of Quinine.

From the result of clinical observations, Dr. Rabuteau cautions against the simultaneous administration of the iodide of potassium and the sulphate of quinine. He has noticed that when these are given in combination they cause pain in the stomach, nausea and vomiting. These symptoms he believes to be due to the liberation of pure iodine in the stomach. He declares that quinine is contra-indicated in women during menstruation. He cites instances in which women who were able to take quinine in the intervals between their menses were unable to do so during menstruation, because of the intense hypograstric pain which invariably followed its use.—*Therapeutic Gazette.*

Hæmoptysis and its Treatment.

Dr. Taylor discusses those cases of hemoptysis in which there is a suspicion of pulmonary tubercle being present. Pulmonary hemorrhages are grouped under four heads: 1, the hemorrhage of the early stage of phthisis. 2, the hemorrhage occurring when the disease is fairly advanced and is progressing; 3, the profuse hemorrhage of the last stage; 4, those occurring in cases of bronchitis, in "bleeders," in vicarious menstruation, and in mitral valvular disease. As regards treatment, the author states that in many cases he considers there is an undue precipitancy in employing the astringents usually advocated, and that in the early stage of pulmonary consumption a small amount of hemorrhage has been rather beneficial than otherwise. A blood-spitting at this period is merely a method to alleviate a congested apex. Consequently it is a congestion that has to be combated, not the subsequent hemorrhage. The best treatment in these cases is to attend to the patient's general health, ordering moderate exercise without fatigue. As regards climate, the author considers a residence in the high lands around Buxton and the Derbyshire Peak to be highly beneficial; whilst Bournemouth, Hastings, etc., are too relaxing. In cases where the pulmonary hemorrhage is severe, it is better to give a good purgative than to rely on large doses of gallic acid, etc. An ice-bag placed on the chest is considered valueless, but the opposite line of treatment is highly recommended,—viz., the application of hot flannels over the angles of the ribs from the summit to the base of the thorax,—*i. e.*, over the sympathetic ganglia. Turning to medical remedies, the chief drug which the author relies upon is opium, this acting like a charm if given alone and in sufficient quantities. Should the hemorrhage be very profuse, digitalis may be added in doses of fifteen to twenty minims of the tincture. When opium is contra-indicated, then oil of turpentine or the liquid extract of ergot are said to be useful.—*London Medical Record.*

Uterine Displacements—Glycerite of Alum Tampons.

Dr. Robert Bell, in writing in the *Edinburgh Med. Jour.*, March, 1884, says: "There are certain conditions of the uterus where the introduction of a pessary would produce much more pain and a more serious array of symptoms than the mal-position, if left alone, would tend to do; and it is in such circumstances that the tampon, in my experience, has proved of such eminent service. We are all familiar with the great power glycerine exerts in abstracting fluid from œdematous tissues; but it may not be equally well known that this power is very much enhanced when the glycerine contains alum in solution. Moreover, the presence of alum, by virtue of its astringent properties, gives tone to the vaginal wall and the uterine wall and supports. The tampon, therefore, when saturated with a solution of this salt in glycerine, and properly applied in flexions or versions, acts in three different and beneficial ways: 1st, as a support; 2d, as a depleting agent; and 3d, as an invigorating agent to the uterus and vagina."

He states that the tampon varies in size with that of the vagina, and that it is well to attach a piece of fine cord to it to make its withdrawal easy of accomplishment. The proportion of alum to glycerine is one in eight, and to every eighty ounces an ounce of boracic acid is added to keep the tampon from becoming fetid, which it would otherwise do if the discharge from the uterus is at all copious. The tampon itself is composed of carded cotton. He would therefore recommend this method of treatment in cases where the use of the pessary is inadmissible.—*Chicago Medical Times.*

The Medical Chronicle.

A Monthly Journal for the Practitioner.

GEORGE H. ROHÉ, M. D., Editor.

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DR. GEORGE H. ROHÉ,

Cor. Greene & Mulberry Sts., - Balto., Md.

BALTIMORE, NOVEMBER, 1884.

EDITORIAL.

The American Academy of Medicine.

The American Academy of Medicine, which has just held its annual session in Baltimore, is an organisation whose active membership is composed exclusively of medical men who have the privilege of appending A. M., as well as M. D. to their names. The principal object of the Academy is said to be the encouragement of classical training previous to competing for the diploma of doctor in medicine. While this object is certainly a very laudable one, we doubt whether the methods adopted are likely to secure it. In the first place, an association which appropriates the title of Academy, certainly arrogates to itself a position which it must show a reasonable right to hold. If one looks over the list of members, however, comparatively few names strike one as entitling the owners thereof to claim superiority over their neighbors who are not holders of a classical degree.

The work of this Academy hitherto, has principally been devoted to discrediting the validity of the doctor's degree, as conferred by most American medical colleges. American medical schools, say these Academicians, are purely money-making institutions. They will accept any plowboy who can pay the fee demanded, and graduate him as M. D., without regard to his qualifications. No one will probably deny that some incompetent men are graduated as doctors of medicine, but we desire to call attention to another fact, namely: that the degree of A. B., or A. M., is neither evidence of classical training, nor a guarantee that the holder of it is better qualified to study or practise medicine than his less fortunate competitor whose preliminary education was limited to the ordinary branches taught in the common schools.

Secondly, an Academy of Medicine which lacks among its membership many of the foremost representatives of the profession, and which yet includes some of the most vainglorious boasters, and others whose professional methods verge on the very edge of quackery, is certainly not the proper organisation to elevate the professional standard, or effect a reform in the methods of medical education.

The Academy seems to be above all else, a mutual admiration society, composed largely of medical dudes and professional pharisees, who at every annual meeting repeat the words of the pharisee of Holy Writ: "Lord, I thank thee that I am not as yonder publican,"—the publican in the case being the ordinary every day doctor, who does his duty to his fellow-man as well as he knows how, and who does not scorn to take his hardly earned fee for his honest work, believing that even in this vineyard the laborer is worthy of his hire.

Prizes for Sanitary Investigations.

At the meeting of the American Public Health Association held in St. Louis, on October 14 to 17 inclusive, a public spirited citizen of Rochester, N. Y., Mr. Henry S. Lomb, placed at the disposal of the Association two thousand dollars to be distributed as prizes for sanitary work. The subjects announced for competition, and

the amounts of the respective prizes are as follows:

1. Healthy homes and foods for the working classes. Prize, $500.

2. Sanitary conditions and necessities of school houses and school life. Prize, $500.

3. Disinfectants and individual prophylaxis against infectious diseases. Prize, $500.

4. Appliances and means for saving life, and for protection against injurious influences of occupations upon health. Prize, $500.

The prizes are to be adjudged by a committee of five, to be appointed as follows: One member by the National board of health; three by the Executive Committee of the American Public Health Association, and one by the president of the conference of State boards of health held last month in St. Louis. The essays must be in the hands of the committee by the first of April next. The conditions of the competition will be announced through the medical press as soon as the committee is appointed.

The desire of Mr. Lomb, we understand, is to obtain essays of a practical character, such as could be distributed freely among the people, and be used as a means of popular instruction in the art of preserving health. Scientific investigations will be useful only as means to an end, the end being to bring the results of sanitary investigations by experts home to the people.

It is sincerely to be hoped that the generosity and public spirit of Mr. Lomb, manifested by the institution of these liberal prizes, will bring out work of the best character from our sanitarians.

A New Local Anesthetic.

For several weeks past, our New York and Philadelphia contemporaries have contained a multitude of articles upon the local anesthesia produced by the hydrochlorate of cocaine, the alkaloid of enythroxylon coca. Experiments have shown that when a two to four per cent. solution is instilled into the eye, it produces dilatation of the pupil, and markedly diminishes the sensitiveness of the conjunctiva, so that operations for strabismus or cataract may be performed without pain to the patient.

Sprayed into the throat, the solution produces numbness of the fauces, so that instruments can be passed into the pharynx without causing reflex muscular contractions. Introduced into the nose, sensibility of the mucous membrane, and the power of smell were temporarily destroyed.

Injected into the urethra cocaine renders the mucous membrane insensitive, so that instruments may be passed without causing pain.

If these observations are verified, a new agent of great value has been added to the materia medica.

CURRENT LITERATURE.

Handbook of the Diagnosis and Treatment of Skin Diseases. By Arthur Van Harlingen, M.D., Professor of Diseases of the Skin in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. With two colored plates. Philadelphia: P. Blackiston, Son & Co., 1884.

This handy little book is a very convenient manual for students while attending lectures, when larger and more systematic works cannot be thoroughly studied. It is also an excellent handbook for those "busy practitioners" who cannot find time to consult the larger works on dermatology. We believe that for these two classes Prof. Van Harlingen's book is the best now obtainable. It is, we believe, as good as a book of its size can be made. It cannot, however, nor is it intended by the author to displace the excellent treatises of Professors Duhring and Hyde, which American dermatologists point to with pride as representative in this department of medical literature.

Manual of Chemistry. A guide to lectures and laboratory work for beginners in chemistry. A text-book specially adapted for students of pharmacy and medicine, by Wm. Simon, Ph. D., M.D., Professor of Chemistry and Toxicology in the College of Physicians and Surgeons, Baltimore. Prof of Chemistry and Analytical Chemistry in the Maryland College of Pharmacy. With sixteen illustrations on wood and seven colored plates, representing fifty-six chemical reactions. Philadelphia, Henry C. Lea's Son & Co., 1884.

Prof. Simon has produced a model text-book of chemistry for medical and pharmaceutical students. His long experience as a teacher has given him just that acquaintance with the wants of students necessary to write such a work. The difficulties of chemical physics and of the laws of combination are made easy to comprehension.

The colored plates are marvels of faithful coloring, most of them being the actual precipitates of the combinations intended to be shown, while many are painted from nature by the artistic hand of the wife of the author.

We congratulate the author upon the excellent work he has produced, and predict for it a great success.

The Medical Record Visiting List for 1885. New York. Wm. Wood & Co.

This visiting list possesses very decided advantages and is issued in an exceedingly handsome style. Its contents, include, beside a very conveniently arranged visiting list for thirty patients weekly, the metric system, doses of drugs for subcutaneous injection, doses of common and rare drugs, disinfectants, urinary analysis and other subjects which the physician often wants at a moment's notice.

A CREMATORY has been built in Brooklyn.

FLOTSAM.

TWO cases of human actinomycosis have been recently observed in Chicago.

MR. J. NETTEN RADCLIFFE, one of the ablest English Sanitary officers is dead.

POWDERED oxide of zinc is said to be an excellent dressing for chancrous ulcers.

THERE are twelve hundred standard medical works in the Chicago Public Library.

A CASE of scarlet fever in a canary has been recently reported in the *British Medical Journal.*

MILLIONAIRE Vanderbilt has given a round half million to the New York College of Physicians and Surgeons.

RINDFLEISCH, Klebs, Ziegler and Weigert have been mentioned as successors to the chair of Cohnheim, at Leipzig.

DR. W. H. BOBBITT, of Raleigh, N. C., (class of 1882, C. P. & S.) is a bachelor no longer. We tender our best wishes.

DR. WM. A. HARDAWAY, of St. Louis, was elected President of the American Dermatological Association at the recent meeting.

RECENT experimental inoculations by Dr. G. M. Sternberg, have shown that the micrococcus found in gonorrhœal pus has no infective properties.

AT the last meeting of the American Public Health Association. Dr. James E. Reeves was elected President. As Secretary of the State Board of Health of West Virginia, and in other positions of honor and trust, Dr. Reeves has always been foremost as a laborer for the advancement of the profession. The new honor which has been conferred upon him is well bestowed.

The Medical Chronicle.

BALTIMORE, DECEMBER, 1884.

ORIGINAL ARTICLES.

ARTICLE I.

THE USE OF ANESTHETICS IN OBSTETRIC PRACTICE.

By B. S. ROSEBERRY, M. D., Baltimore.

[Read before the Baltimore Medical Association.]

Very shortly after the discovery of chloroform, and its introduction into use as an anesthetic in surgical operations, its use in obstetric practice for the purpose of abolishing, or at all events very much obtunding the pains of labor, naturally suggested itself.

Sir James Y. Simpson early became an enthusiastic advocate of its use, and following him, and largely on account of his efforts, a great many obstetricians throughout Europe adopted the practice. Its adoption in America was rather slow, it having met with considerable opposition from men high in authority, notably from the late Charles D. Meigs, of Phila.

The latter gentleman most strenuously opposed its use, and in a letter to Simpson gave very fully and clearly the reasons for his opposition. Time, however, has produced a decided change in its favor, and at the present day I believe the practice is in this country quite general. I presume, without knowing positively, that the majority of our physicians, particularly in large cities, are in favor of and practice the method.

Some there are, however, who still are unconverted, who do not yet see the necessity for, nor admit the wisdom of producing anesthesia in ordinary uncomplicated natural labor. To this minority I confess to belong, and will endeavor this evening to give my reasons therefor.

First let me state, that in all I shall have to say, I refer only to the use of anesthetics in ordinary, natural, uncomplicated labor—labors requiring no instrumental interference or surgical procedure, and in which the pain is only that necessarily attending and forming part of the natural history of an ordinary confinement. I do not mean, of course, to deny the advisability or necessity of using anesthetics in cases of labor where the opposite conditions of affairs exist, and in which, from one cause or another, the pain naturally present is aggravated to an abnormal degree, interfering by its very intensity, as it oftentimes does, with the natural sequence of events, and seeming to prolong the parturient period; nor to that other class of cases where instrumental interference is necessary. In all these the question is not one of relieving labor pains proper, but of meeting extraordinary requirements, and, of course, we are here governed by the same rules which obtain in general surgery. That against which I contend is the use of anesthetics in ordinary cases of confinement.

Briefly, the reasons for my positon are the following: First as to the necessity of the practice. I presume anyone will admit, here as elsewhere, that it is not good practice to use a remedy unnecessarily. Now here I claim it is unnecessary for several different reasons. The pain is not the result of an abnormal condition, of a diseased state, but is part and parcel of an entirely physiological process. There is a certainty of a termination of the pain with the cessation of the cause. I am aware that there are other conditions, aside from labor, in which the same remark would hold good, and yet in which we would not be justified in withholding the benefits of anesthesia. But the cases

are not parallel. All pains, except labor pains, are abnormal, and exist under very different states and conditions of the general system from that which obtains in natural labor. And in these cases there are ends to subserve by abolishing pain, which are no part of the problem in parturition. The truth of this is of course apparent, and needs no argument to prove it. The great majority of parturient women are entirely capable of withstanding without ultimate detriment to their constitution all the pain which the process causes them to undergo; therefore, according to a universally accepted dogma in our profession, we are not justifiable in using an agent so capable of producing dangerous and even fatal results as chloroform, in any case where a reasonable amount of fortitude on the part of the patient is all that is necessary, in order to enable him (or her) to undergo all that is required to be borne. This, I say, is an accepted maxim of general surgery. I fail to see why the case of the parturient woman should form an exception.

That she is entirely able to bear, without injury to herself, all the pain incident to the occasion, is, I think, very easy of demonstration. The pain is not continuous but intermittent. In the intervals she is entirely comfortable or nearly so, most generally, according to my experience, bright and cheerful. I do not consider the lying-in room the gloomy place that some would depict it, and every physician, whether he be an advocate of anesthesia or not, knows that it is not the chamber of agonies which it is popularly supposed to be by the inexperienced laity.

The woman is in pain ordinarily not over six minutes in each hour, and these six minutes are distributed very evenly throughout the whole hour, so that for every half minute of suffering there are about four and a half minutes of ease. In a labor then of four or five hours, which I believe is about the average, the woman would actually be in pain only about twenty four or thirty minutes, and this, evenly distributed, with comparatively long intervals of rest and comfort. Now I cannot see in a case of this sort a necessity for the induction of anesthesia, even if it were unattended with any danger. I object, therefore, on the ground of the absence of necessity, so far as the relief of pain is concerned. This I am aware may be called an objection on negative grounds, but to my mind there are other and positive reasons why we should not induce anesthesia in the normal parturient. First, it is not devoid of danger here more than elsewhere, only in so far as that in labor so profound a condition of anesthesia is not ordinarily induced. But every physician knows that many of the accidents from anesthetics have occurred at the very beginning of the inhalation, when but a trifling amount had been administered. Also, it is well known that it is by no means always possible to say before hand what particular case will be obnoxious to its influence. The fatty-heart theory seems to have been pretty well exploded. At any rate surgeons of large experience maintain that these are not by any means the cases which furnish the largest quota of accidents, and post-mortem examination often fails to demonstrate any organic change to which the fatal result could be ascribed. It would seem that some persons possess a peculiar idiosyncrasy toward anesthetics, just as some do toward opium, ipecac and other drugs. There is no way of determining beforehand who is going to exhibit this idiosyncrasy. I do not claim that the amount of danger is very great; still that there is some I think no one will deny. I have not been able to find any statistics showing the proportion of deaths from chloroform in labor to the whole number of labors so conducted. I do not know that any such statistics have ever been published. In a tabulated statement of 393 cases of sudden

death during the inhalation of chloroform administered for various purposes, I find six occurring in parturient women. Considering how frequently chloroform is used in the lying-in room, I think it not unlikely that if a full report of all cases in which it has ever been used could be obtained, the proportion of deaths directly due to its use would not at least fall below that for an equal number of cases in which it is used for other purposes. I say, though, that I have not been able to find any such statistics, nor do I know if any such exist. The six cases of sudden death just referred to are a part of a collection of 393, reported by Prof. Henry M. Lyman of Chicago, in his work on Artificial Anesthesia and Anesthetics. Case first is No. 57 of the series: "A lady, during the early stage of labor, in the care of a nurse, her physician being absent, inhaled about 3 v of chloroform from a handkerchief, went to sleep and was found dead and cold when the nurse, who had also fallen asleep, awoke." Case second is No. 79 of series: "Female —married; six times pregnant; had taken chloroform at each confinemen ; September 20, '58, her pains commenced at 2 A. M.; no one but nurse in attendance. About twenty minutes of eight A. M. expulsive pains came on, when she called for chloroform. After breathing a few times from a handkerchief she threw herself violently back, gave a gasp or two, a slight gurgle was heard in her throat, and respiration and pulse instantly ceased. Her physician arrived on the spot ten minutes later and found her dead." The quantity used did not exceed 3 ii. Case three is No. 80 of series: "Dr. Duncan states that he was called to see a case of confinement in which, on arrival, he found the patient had died suddenly while inhaling a small quantity of chloroform during the pains of labor. Published by Matthews Duncan, Edinburg, in *Med. Times and Gazette*, November 20, 1858." Case four is No. 327 of series: "Age 25 years. Multipara entered Maternity at Lyons, March 23, 1876. Labor pains continued during evening and night. Next morning at 7 membranes ruptured. Shoulder presentation. To facilitate version, chloroform was given by nurse without calling upon attending physician. Patient did not arouse after operation. House physician was then called, who found pulse very small, face cyanotic, inspirations short and frequent. In spite of all efforts to the contrary, patient died in ten minutes." The amount used in this case is not stated. Case five is No. 328 of series: "Primipara, age 22. Head of child was at point of birth when slight convulsion occurred. Chloroform given and patient kept under its influence. After delivery of head, while uterus was contracting, the patient shuddered and her pulse ceased. She was dead." Amount given not stated. Case six is 293 of series: Primipara 36 years old. In good health, weighing 145 lbs. Had been unusually well during pregnancy. Kidneys healthy. Urinary secretion normal. Had been in natural labor eight hours. The os uteri was fully dilated and head descending. The severity of suffering caused her to insist upon chloroform, and finally the physician allowed her to inhale intermittently a few drops at a time upon a handkerchief. She did not become unconscious, and at the end of 10 minutes began to complain of a sense of thoracic oppression and dyspnœa, desiring to be raised in the sitting position. She was thus raised up, and immediately the neck and face became livid. The patient was at once placed in horizontal position, but had already become unconscious. She frothed slightly at the mouth, the cheeks were blown out in expiration, and after half dozen sighing respirations at increasing intervals, she ceased to breathe. Condition of pulse not observed. All efforts at resuscitation failed. Child left undelivered. No

autopsy." Reported by Wallace K. Harrison, Chicago, March, 1881.

Here are six cases in which death occurred probably directly as a result of the use of chloroform.

There seems to be nothing in the history of the cases to warrant us in believing that such would have been the result if the anesthetic had not been used. In but one of these cases does there seem to have been any good reason for using the chloroform, viz: in case 4, where it was done to facilitate version. Such cases, I think, speak for themselves, and require no comment. Of course they are exceptional. In the great majority, I am willing to admit that no such result would follow, but the risk is always assumed. Now, I claim we are not justifiable in subjecting the woman to this risk. The position of the ordinary parturient is one of sufficient danger, though happily it is the rule for the period to be passed through in safety. I object then to the use of anesthetics in uncomplicated labor, on the ground that it is not without danger to the woman, and that it is unjust to her to cause her to undergo unnecessarily this additional risk. If I should administer chloroform to 99 women for the purpose of rendering them insensible to pain, which they were entirely able to bear, and should sacrifice the life of the one-hundredth woman by the practice, I should consider the immunity of the ninety and nine dearly bought, and I think my conscience would not be a peaceful one.

But leaving out of consideration the question of danger, I think there are other good and sufficient reasons against the practice. I maintain, that in abolishing the woman's consciousness of pain, the accoucheur deprives himself of a very important ally in the proper and successful management of the case. The character of the woman's cries and gestures, under the influence of the pain, give a tolerably correct idea of how the labor is progressing; in fact, as every physician knows, one can generally tell by these signs alone to what extent the labor has advanced. But this is of secondary importance, as we, of course, do not rely upon anything to the exclusion of digital examination.

But the point which I wish to make, and to my mind it is of great importance, is that the degree of expulsive force in the second stage of labor is very accurately represented by the severity of the pain and the expressions which the woman gives of the same, and better than anything else, tell the physician when to interfere, particularly in respect to protecting the perineum from undue pressure and possible rupture.

It has seemed to me always that the largest factor in the production of ruptured perineum is the too rapid passage of the head before the tissues have had sufficient time to stretch. Under the impulse of a powerful pain the head advances so rapidly that the thin tense edge of the perineum will almost certainly give way, unless we guard against it by lessening the pressure. Now I say that the evidence which the woman, conscious of pain, gives of her suffering, as shown in her cries and movements at this critical period, furnishes the physician with the most valuable indications for his own conduct, which right here should consist in careful protection of the perineum from rupture, by holding back the advancing head, and thus securing time for the necessary dilatation to take place, which will generally happen if a less violent pressure is maintained during these few final pains I do not believe we would appreciate so fully how great the pressure is if it were not for the woman's expression of pain, and so, under an anesthetic, if the pressure should really be as great, I believe the perineum would in many cases rupture before we even suspected the danger. I am confident that I have on several occasions succeeded in averting an impending rupture by timely assistance in this way, my

main guide being the woman's expressions of unusual pain, which to my mind was indicative of a degree of expulsive force that needed to be antagonised. I do not say this idea is the correct one. I simply say that to my mind it is. And if so, surely a little more, or even a great deal more pain and an intact perineum is a good compromise for the woman, as compared with a painless labor and ruptured perineum. The position taken in this particular is based upon the assumption that the anesthetic does not materially modify the force of the uterine contractions, and I believe this is what its advocates claim for it. But suppose some should say that the relaxing effects of the drug would obviate the danger spoken of. Then I say if this were true, it would open up another set of objections to its use in the opposite direction, inasmuch as if it does exert this relaxing influence upon uterine muscular contraction, it is capable of retarding the labor, or even for a time putting a stop to it altogether; in which case uterine stimulants would require to be used, and the labor after all would have to be completed without anesthesia. I have never used chloroform or other anesthetic in natural, uncomplicated labor, but I have seen the opinion expressed, that this temporary paralysis of the contractile fibres of the uterus is a thing by no means unlikely to occur, necessitating of course, when it does, the withdrawal of the anesthetic. So, then, whether chloroform does or does not act as a relaxer of uterine muscular fibre, I am of opinion that in all ordinary cases we can get along in all particulars more satisfactorily without than with it.

In the report of the transactions of the Obstetrical and Gynecological Society of Washington, published in the current (Nov.) number of "*American Journal of Obstetrics*," the subject of the management of the perineum during labor being under discussion, I find the opinion expressed by Dr. Kleinschmidt, that ether increases the risk of laceration. He says, "true it relaxes the muscles, but it also takes away their elasticity, and thus the head, forced down by undiminished uterine contractions, encounters an almost inert barrier, through which, instead of over which, it is driven." He says most of the cases of laceration he has ever seen have occurred under anesthesia.

I can think of a number of objections from my point of view which the limits of this paper will not permit me to dwell upon. Such would be the occurrence of nausea and vomiting, which is always undesirable, and, of much greater moment, the increased liability to post partum hemorrhage, the chance of inviting subinvolution, and the possible deleterious effects upon the child.

Entertaining these views, it will readily be seen that my own experience in anesthetic labors is very limited. I have used chloroform in a few cases, but they have been either those in which it was necessary to use instruments, or in which the muscular contractility of the perineum seemed to be so great, spasmodic as it were, as to require the use of a relaxing agent to permit the passage of the head. In a few cases, where the pain has been extraordinarily acute, I have very guardedly allowed a few inhalations of chloroform to mitigate its intensity. Even then I have never felt quite sure that it was altogether prudent to do so.

In conclusion then, while admitting that under certain circumstances it may be justifiable to use an anesthetic cautiously in what might be termed natural labor, I am firmly of the opinion that as a general rule the practice should be limited to cases of preternatural labor requiring operative procedures.

THE mortality from cholera treated at the Pharo Hospital in Marseilles, during the recent epidemic, was 62.4 per cent.

ARTICLE II.

THE TREATMENT OF THE LATER SYPHILITIC LESIONS OF THE SKIN AND SUBCUTANEOUS CONNECTIVE TISSUE.*

By GEORGE H. ROHÉ, M. D.

Professor of Hygiene and Clinical Dermatology, College of Physicians and Surgeons; Member of the American Dermatological Association; of the Medical and Chirurgical Faculty of Maryland, etc.

In the following paper I purpose considering briefly the clinical features and treatment of those manifestations of syphilis which affect the skin and sub-cutaneous connective tissue during the later stages of the disease, or the so-called tertiary period. I shall, therefore, pass over those generalised skin eruptions which usually occur within the first year or eighteen months after infection, and limit my remarks to the tubercular, gummatous and ulcerating lesions of the integument and its connective-tissue substratum.

In its early stages syphilis presents many of the clinical features which characterise the history of the eruptive fevers. There is a period of incubation, of febrile disturbance, and of eruption on the cutaneous and mucous surfaces. Then the disease seems to disappear entirely, and the patient's usual condition of health is apparently re-established. In perhaps one-half of the cases the end of the eruptive stage marks the termination of the disease. But in the remaining half, after a varying interval known as the period of latency, a series of lesions appear which present marked differences from those that have gone before. While in the secondary, or eruptive period, the manifestations of the disease are symmetrical, and the disease itself contagious and inoculable both by means of the blood and particular secretions, normal or pathological, and transmissible to the offspring of diseased parents, these characteristics are not present when the disease has passed the secondary period. If the late or tertiary symptoms manifest themselves, they are more distinctly localised, are unsymmetrical, and as a further point of distinction, do not yield readily to the same treatment. Furthermore, in this stage the blood and the products of the lesions are no longer regarded as inoculable by many, while some hold that the hereditary transmission of the disease is no longer possible.

It may be stated, however, that many syphilologists of deservedly high standing do not regard the last two propositions as incontestably established.

These peculiarities in the clinical history of syphilis have led Hutchinson to express the opinion that the so-called tertiary lesions of syphilis were merely sequelæ, and that at the time of their appearance the syphilis no longer existed in the individual. Hutchinson's view has been adopted by Baumler, who has written what seems to me to be, by all odds, the best treatise on syphilis accessible to English readers.* Previous to Hutchinson, Virchow had already expressed the opinion that the tertiary symptoms of syphilis were due to renewed infection of the blood from local residual depots of syphilitic virus in the body. The English surgeon, however, is disposed to deny any blood-infection after the termination of the secondary or eruptive period. The question cannot yet be regarded as settled. While Hutchinson's views have much plausibility, the evidence in their favor is by no means so direct and definite as he claims, and from a purely clinical standpoint, it will be advisable to consider the tertiary period as still a stage in the development of syphilis. An additional reason for considering this period as a true stage of syphilis, and not as a mere sequela, is that it is really the most grave period of the disease. The early stages

* From Transactions of the Medical Society of West Virginia for 1884.

* Ziemssen's Cyclopedia, Vol. III.

of syphilis are not periods of danger to life, but in the gummatous stage, when important internal organs, brain, liver, heart and kidneys become affected, the disease frequently proves fatal. Hence the period of gummatous lesions of the skin is one of great prognostic importance, for when gummata occur in the skin they are probably also invading internal organs.

The gummatous formations of the skin and subcutaneous connective tissue rarely occur before the third year after infection. They may, in exceptional cases, be delayed for ten, twenty or thirty years after the first manifestations of the disease. They may be conveniently divided into two classes, those situated in the skin proper, and generally called the tubercular syphilide, and those situated in the subcutaneous connective tissue, which are known as gummy tumors or gummata. Anatomically, however, there is no difference between the two forms.

The syphilitic gumma consists of an infiltration of small round cells—"granulation cells"—between the fibres of the connective tissue. Coincidently there is at first irritative hyperemia and proliferation of wandering and connective tissue cells, later alteration and occlusion of blood vessels by thrombi formed of endothelial and lymph cells and fibrinous coagula. The infiltrated material either undergoes fatty degeneration and resorption, or breaks down into a semi-purulent, or mucoid mass, which finally breaks through the skin and is slowly discharged externally. The syphilitic infiltration is never organized into stable connective tissue; it either undergoes absorption or breaks down and is cast off. It is of no use as building material in the body.

The course of these late syphilitic lesions is usually very chronic. They may last for months or years with very little change, and simulate various other new growths of the skin, such as lupus or cancer. The points of difference will be pointed out presently.

The tubercular syphilide or gumma of the skin may occur on any region of the body. It is most frequently found however upon the forehead, nose and lips, or at the angles of the mouth. On the trunk the seat of predilection appears to be the scapular region. The extensor surface of the forearm, near the elbow, is also frequently the seat of the eruption. The tubercles are rarely single and disseminated, but are usually aggregated in circular, oval or annular groups.

The eruption begins with the appearance of one or more firm nodules of the characteristic coppery or lean ham color, around which other lesions of the same kind appear, until a small nodular patch is formed. There may be healthy skin between the individual tubercles, or these may be so closely set together as to give the appearance of a uniformly infiltrated patch. If the patch increases, it rarely does so in all directions from the centre, but progresses in one direction, while retrogressive changes follow. The affection seems to creep over the surface, which characteristic is denoted by its adjective *serpiginous*.

In many cases these lesions undergo resolution. The oldest tubercles become flattened; and even depressed below the normal level of the skin, lose their brownish pigmentation, and a pale, scar-like spot remains, showing that there has been destruction and absorption of normal dermal structure and resulting condensation of the connective tissue of the part. At other times the tubercles break down and ulcerate, forming superficial or deep ulcers, which usually advance in one direction, while cicatrisation follows in the wake of the advancing ulceration. In this way persistent crescentic or horseshoe shaped ulcers result, which, in their form and behavior, are almost characteristic of syphilis.

The following case recently came under observation at my clinic in the

College of Physicians and Surgeons. The patient was a white man, aged forty, who gave a history of syphilitic infection followed by general symptoms four years previously. Two months before he applied for treatment, a superficial ulceration attacked the mucous surface of the lower lip, extending outward, gradually, to the cutaneous surface. At the time of his visit, the ulceration of the mucous surface had healed, but the outer surface of the lip presented two irregular ulcers running inward from the angles of the mouth, extending on the left side nearly to the median line. The edges of the ulcers were indurated and slightly elevated above the surrounding skin. On close examination it was noticeable that the irregular ulcerated surface was made up of smaller ulcers, which resulted from breaking down tubercles. Under appropriate treatment the ulcerations healed entirely in a week.

In another class of cases, the tubercles, when they break down, leave little cup-shaped ulcers, which are sometimes surrounded by an apparently spongy, hypertrophied state of the skin. I recall two cases of this sort. The first patient was a white prostitute, about thirty-eight years of age, who had suffered from secondary manifestations of syphilis three years before. She had an ulcer about as large as a dime upon the ala of the nose, which had proved very resistent to treatment. The borders of the ulcer were not indurated, and the hypertrophic condition of the skin immediately surrounding the ulcer above mentioned, was presented. Very recently I was consulted in a similar case. A medical man who had been infected seven years ago, and who had regarded himself as thoroughly recovered, had a small group of tubercles on the left side of the nose. After a few weeks the tubercles broke down and left small cup-shaped ulcers, surrounded by a patch of spongy tissue slightly elevated above the healthy skin.

The gummatous tumors of the subcutaneous tissue are usually larger than those just described, and pursue a somewhat different course. According to Lancereaux (Traite de la Syphilis p. 216) they develop slowly and painlessly, unless involving the course of a nerve; they are globular, firm and elastic, and may at first be rolled under the skin, to which they are but slightly attached. Later, they approach the surface, soften, become adherent to the skin, and present to the touch a sensation like that of certain fatty tumors. The skin acquires a reddish tint, and becomes the seat of a remarkably slow inflammatory process. Gradually the skin becomes thinned and perforated at one or more points, through which the contents of the nodule slowly escape, leaving an irregular, painful ulcer, with steep or undermined border, and a somewhat indurated base. If there is more than one perforation, the skin between the openings frequently undergoes necrosis. The ulcer may slowly heal by granulation, leaving a white, depressed scar, or the necrosis progresses in the manner before described as following the breaking down of the tubercular formation of the skin.

When seated over bones, such as the tibia, ulna, or the cranium a gumma not infrequently simulates a boil or abscess. Fluctuation is sometimes very distinct, and the medical attendant is often tempted to puncture the tumor and evacuate its contents.

The tubercular syphilide and its resulting ulcer bear a very close resemblance to certain forms of lupus. In fact, this resemblance is often so close as to have led to the designation of syphilitic lupus for certain cases. The use of such an equivocal expression should be discountenanced. The nomenclature of medicine should be stripped of its vagueness, and simplified as much as possible. The diagnostic features of the tubercular syphilide and of lupus are sufficiently distinct to allow of a differentiation between them. A case may be either

syphilis or lupus, or the latter disease in a syphilitic subject, but the use of the term syphilitic lupus would only be justifiable in the latter case. I think, however, it might be dispensed with altogether.

The diagnosis between lupus and the tubercular syphilide may usually be made from the appearance and clinical history of the growth. Lupus nearly always begins before the twentieth year, in the majority of cases before puberty. A tertiary syphilide is unlikely to occur before adult life is reached. Lupus is much slower in its progress than syphilis. If ulceration occur, the ulcer in lupus is more likely to be shallow, with sloping edges and uninfiltrated base. The ulcer of lupus is usually painless; the contrary is the fact in syphilis. Finally, if doubt still exists, the aid of anti-syphilitic treatment may be invoked to clear up the diagnosis.

Sycosis may sometime closely simulate a tubercular or gummatous new formation. In sycosis the inflammatory symptoms are usually predominant, while they are wanting in the syphilitic growth. In the latter the demarkation between normal and diseased skin is usually very clearly marked, while in sycosis or other inflammatory tubercular eruptions, the redness of the skin shades off gradually into the normal.

Before discussing the treatment of the tertiary manifestations of syphilis above described, I desire to express the opinion that syphilis is entirely curable by an appropriate method of treatment. I am quite certain that I have seen cases that have completely recovered. Of course it is impossible to say that in these cases there will not be at some time to come renewed outbreaks of the disease, but I venture to question the dictum that has so long ruled in this matter, that an individual who has once been infected with syphilis will always have syphilis, and that as Zeissl says: "At the Judgment Day he will arise from the grave syphilitic." Even if it were true, it is inhuman to take from a man or woman suffering from this disease all hope of recovery. How much more is the doctrine to be condemned then, when its truth is open to serious question.

I need not urge before this audience of practical physicians, the necessity of appropriate constitutional treatment in all cases of syphilis. By this, I mean not merely the use of mercury and iodide of potassium, but other remedies often demanded by the conditions of the system.

Among other internal remedies in tertiary syphilis the first belongs to the iodide of potassium. Physicians frequently fail in producing a prompt effect with this remedy, because they give it in insufficient doses. I rarely begin with a smaller dose than eight grains four times daily, and I have not infrequently directed twenty or thirty grains at a dose, repeated three or four times a day. I remember especially one case of extensive specific ulceration of the scalp with necrosis of the cranial bones, accompanied with the most violent pains, in which ten grain doses three times a day produced hardly any effect. When the dose was increased, at my suggestion, to twenty grains every four hours, the effect was almost magical.

Mercury is of much less use in the late than in the secondary stage, in which it is without doubt a specific, or as Hutchinson expresses it, an antidote to the syphilitic virus. In the tertiary stage I never give it alone, but usually in combination with iodide of potassium. The formula I use is a familiar one. It is as follows:

Hydrarg. bichloridi, gr. j.
Potassi iodidi, ℥ ss.
Aquæ, ℥ ss.
Tinct. cinchonæ comp. q. s. ft. ℥ iij.

M. S.: A teaspoonful in water three or four times daily. I have recently prescribed the iodide of sodium with apparently equally as satisfactory results as I have obtained from the pot-

assium salt. I am inclined to prefer it because it agrees better with the stomach.

I have not been able to satisfy myself that the decoctions, fluid extracts or syrups of various vegetable alteratives, so-called, for example, sarsaparilla, stillingia, mezereon, prickly-ash, etc., produce any beneficial effect in syphilis, but others of large experience recommend them highly. As they are usually prescribed in combination with mercury or iodide of potassium, the effect is probably to an equal if not greater degree due to the specific remedy.

In treating syphilis of whatever stage, it must always be borne in mind that the disease is exceedingly destructive to the red corpuscles of the blood. Consequently, restorative agents must be combined with the specific medicines, if the practitioner would obtain the best results. Of these constructive agents good food, fresh air, cleanliness, proper clothing and exercise are of prime importance. The food should be nutritious, palatable and easily digestible; the clothing should be appropriate to the season; baths should be taken frequently in order to maintain the functional activity of the skin, and sufficient exercise in the open air should be insisted on. Overwork, both physical and mental, should, however, be avoided.

Among the more distinctly medicinal restorative agents cod liver oil and iron stand first. In fact, I rarely have occasion to prescribe any others, except quinine in malarious conditions, or as a nerve tonic. The cod liver oil I order in teaspoonful doses thrice daily. Iron I most frequently give in the form of the tincture of the chloride in full doses. It has rarely disappointed me. The vegetable acid salts, the citrate, potassio-tartrate and malo-citrate have also given satisfaction. But in those cases in which a high degree of cachexia is present, with a weak stomach, I have obtained the most satisfactory results from the administration of the pills of protocarbonate of iron (Blaud's pills.*) Quite recently the fluid extract of erythroxylon coca has been highly recommended as an adjuvant to the specific treatment of syphilis, by my friend, Dr. Robert W. Taylor, of New York. In reference to this remedy he uses the following language: "I know of no remedy which can take its place. I would not be understood as claiming that the remedy is a specific for syphilis, for such it is not, but that its marked tonic effect upon the heart, nervous system and capillaries, and its power to invigorate the system, to improve nutrition, and to sustain life, is so great that its use in syphilis, secondary to that of mercury and the iodide of potassium, is attended with results which no other agent now known to us possesses.†

I consider the local treatment of the tertiary lesions of syphilis of great importance. By appropriate local measures, ulceration of syphilitic tubercles can often be prevented, and when ulcers have formed their healing can be hastened. A means of promoting the absorption of gummatous growths of the skin or subcutaneous tissue is the local application of mercury. The preparation I usually employ is the mercurial plaster, which is spread upon leather, muslin or adhesive plaster, and applied over the infiltration. It is often surprising to see with what rapidity the lesions disappear under this treatment, combined, of course, with appropriate internal medication. I have seen gummata, which seemed on the point of breaking through the skin, undergo rapid involution and absorption when the mercurial plaster was applied. Syphilitic tubercles sometimes obsti-

*I have often experienced difficulty in having these pills properly made up by pharmacists, and although I do not like to recommend the specific preparations of particular manufacturers, I cannot omit calling attention to these pills as prepared by Wm. R. Warner & Co., of Philadelphia, under the name of *pil chalybeate.*

†Bumstead and Taylor: The Pathology and Treatment of Venereal Diseases, 5th edition, Philadelphia, 1883.

nately resist the influence of internal treatment until this is supplemented by the local application of the mercurial.

When ulceration has occurred, it is my practice to first scrape out the base of the ulcer with the dermal curette, in order to remove as much as possible of the non-organisable syphilitic infiltration. A strong solution of silver nitrate is then brushed over the scraped surface, and the sore dressed with iodoform. This may be used either in powder or in the form of an ointment containing one drachm to the ounce of vaseline. To stiffen the ointment, I usually add an equal quantity of finely pulverized starch, and sometimes combine with it balsam of Peru, which masks in a measure, the powerful odor of iodoform, and adds to the stimulant properties of the ointment. A convenient formula is the following:

Iodoformi, ʒ ij.
Bals. Peruv., ʒ ij.
Pulv. Amyli,
Vaselini, aa, ℥ j. M. ft. ungt.

S: Apply once or twice daily.

In cases where the odor of iodoform constituted an objection to its use, I have used, with favorable results, boracic acid. Care should be taken to procure this in fine powder, otherwise the sharp crystals frequently cause exquisite pain when applied to the sensitive granulating surface of an ulcer.

Where, in cases of tertiary syphilitic lesions of the skin and subcutaneous connective tissue, the combined internal and external treatment which I have endeavored to sketch is consistently carried out, it will be found that these affections, so destructive when untreated, or improperly treated, become as amenable to our therapeutic interference as intermittent fever, or simple abscess.

A MEETING of the National Conference of the State Boards of Health will be held in Washington on December 10th.

ARTICLE III.

MICHIGAN STATE BOARD OF HEALTH.

[Reported for the MEDICAL CHRONICLE.]

The regular quarterly meeting of the Michigan State Board of Health was held at Lansing, October 7, 1884.

Prof. R. C. Kedzie presented nine samples of drinking water taken from the public water supplies of Bay City, West Bay City, Grand Haven, and Ludington, all of which show a large quantity of organic matter and other impurities. Prof. Kedzie was granted till November 1st to complete his paper on "Potable and Culinary Waters in Michigan, with especial reference to contamination by sawdust," for publication in the Report of the Board for 1884. Dr. Kedzie was also requested to make a special report on the use of explosive substances for heating and lighting purposes.

The secretary continued his report on outbreaks of cheese-poisoning. (See CHRONICLE for August.) Seven outbreaks in Michigan had been reported this year, in which there were 190 cases of sickness, but no deaths. The symptoms following the eating of the cheese were very similar in all cases, consisting of pain in the stomach, cramping of muscles, coldness of extremities, and great prostration, with retching and purging, lasting for several hours. In most cases the larger the amount of cheese eaten the more violent were the symptoms. Samples of the Lowell cheese had an acid reaction and a peculiar strong odor, believed to be due to caprilic acid, or caproic acid. Examined with a one-tenth inch immersion objective, this cheese was found to contain mycelium of a mould, and to be swarming with several kinds of actively moving bacteria. Samples of the cheese were sent to Dr. V. C. Vaughan, of Michigan University, and to Prof. T. J. Burrill, of Illinois State Industrial University, for further examination and experiment.

Further time was given to the committee on text-books on physiology and hygiene. The secretary called attention to a sanitary house-to-house inspection which had been made recently in the city of Ann Arbor. It is believed that this is the first systematic inspection of the kind ever made in this State.

A paper on typhoid fever was presented by the secretary, and was approved for publication in the annual report of this board.

The State has been free from small-pox during the quarter.

The recent report that pleuro-pneumonia exists among cattle in the vicinity of Nashville, Mich., proved, on inquiry, to be unfounded. During the quarter, glanders was reported present among horses in Delta county. Letters were sent to health officers or supervisors of all townships where the disease was reported to exist, urging prompt action on the part of the local boards of health to exterminate the disease. It is believed that there are fewer cases than were at first reported. As one result of the correspondence, two of the infected horses were shot by their owner.

The secretary reported the preparation, publication, and distribution of 12,000 copies of the document on the Prevention and Restriction of Cholera. A similar document on cholera in its relation to railroads, had also been prepared at the reque st of the Commissioner of Railroads, an d had been printed and distributed by the Commissioner, in connexion with a circular from his office to all railroad officials in Michigan.

CORRESPONDENCE.

Strangulated or Incarcerated Hernia.

Editor Chronicle:

From the history given by Dr. L. B. Saulsbury of his very interesting case of hernia as reported in the October number of the CHRONICLE, I would suggest that it was probably a case of *incarcerated*, and not *strangulated* hernia, for while in both cases we would have an irreducible form of hernia, yet in the former (incarcerated) the circulation of the incarcerated mass is not to any great extent interfered with, while in the latter case (strangulated) it is most frequently cut entirely off, causing in a very short time *gangrene* of the bowel, which it is now proven we could not have had in Dr. S.'s case. The fact also that his patient did not vomit fecal matter till the 9th day, favors this supposition.

JOHN D. BLAKE, M. D.

ANALECTS.

Case of Uric Acid Calculus, which Appeared to Have Been Dissolved in the Pelvis of the Left Kidney, by Alkaline Remedies.

Having arrived at your diagnosis in cases of calculi in the kidney, and having determined in your own mind that a stone exists, the question arises, What course are you to pursue?

The best authorities assert that "the medical treatment in these cases is unsatisfactory, and can at the best be only palliative." Now, as I do not belong to the so-called "school of medical skepticism," I have come to the conclusion from the result obtained in a case (the history of which I am about to relate) that it would be just as well to first try what remedies will accomplish before we resort to the knife.

Case.—James G., age 45; large, fleshy man, of a gouty diathesis. I was called to see him first, August 2d, in the morning; found him suffering from a severe attack of nephritic colic; said he had the first attack of this kind while in the Union army, about 1862, and a recurrence of the same trouble on an average of about once in six months ever since, passing a small calculus at each time, one of which he had saved and I took

possession of. I concluded, from the history he gave me of previous attacks, that this one would pass off about the same, so prescribed Dover's powder and application of hot cloths to relieve pain, etc. Called again in the evening ; found him resting quite easy ; said the paroxysms of pain would come on about every two or three hours and last for half an hour, when it seemed as if the stone would work back into the pelvis of the kidney, and then he would have relief for a while.

August 3d (morning), condition about the same, except the pain would be a little more severe at times.

I quote his own words, "Doctor, I am in for it this time. That stone is too large to ever pass down into the bladder, unless you can give me some medicine to dissolve off part of it in the kidney."

The question came to my mind, is a doctor justified in folding his arms and waiting, in such a case as this, in hopes that the calculus might become encysted? I think not, anyhow not until he has tried the solvent properties of the different remedies.

I analysed the calculus that he had passed in one of his previous attacks, and found it to be composed of uric acid principally, and I had good reason to suppose that the one in his kidney at this time was of the same composition. The urine gave a marked acid reaction.

After a consultation with a medical friend of mine, we concluded to put the patient on alkaline remedies—potassii acetas, gr. x, lithii carbonas, gr. iij, every hour, largely diluted with distilled water. In about twenty-four hours after commencement of this treatment, he began to pass "*red gravel*" with his urine; soon after he experienced instant relief from all pain—said he could feel the stone drop into the bladder. At 5 p. m. same day (August 4th), passed a calculus with his urine, one half inch long by one-quarter inch in diameter, composed of uric acid, quite soft—would almost crumble between the fingers while handling it. The concretions that he passed altogether would about fill a tablespoon. His urine soon cleared up, and he has had no trouble since. The result I obtained in this case is certainly in favor of this method of treatment. —*Chicago Med. Jour. and Ex.*

American Public Health Association.

[Phila. Med. Times Report.]

The Twelfth Annual Session of the American Public Health Association, at St. Louis, Missouri, October 14 to 17, was one of the most successful ever held. The attendance was as full as usual, but the number of papers presented was larger than ever before in the history of the organisation. I would like to say as much for the quality of the papers, but candor compels the statement that many of them failed to come up to the standard which the Association ought to demand. As usual, a few of these papers were exceptionally valuable, either from their scientific character or their practical importance.

The first paper read gave a review of the reforms demanded by sanitarians in the "Construction of Habitations for the Poor." The author, Dr. C. W. Chancellor, of Baltimore, suggested that an unsanitary house should be declared a public nuisance and dealt with accordingly. Only in this manner could the law reach the difficulty.

Major S. A. Robinson, of Washington, followed with an excellent practical account of how to construct healthy habitations for the poorer classes. He considered in detail the site, water and drainage-fixtures, light, and ventilation. This was one of the best papers presented during the meeting. The speaker showed by his manner of treating the subject that he had a thorough practical acquaintance with all details. The same may be said of a paper of great

interest to the practical sanitarian, by Dr. W. K. Newton, of Paterson, New Jersey, describing how the sanitary survey of a house should be conducted.

Drs. George H. Rohé, of Baltimore, Walter Wyman, United States Marine Hospital Service, and Adolph Alt, of St. Louis, read papers on the "Hygiene of Occupations." The essay of Dr. Rohé was statistical, and showed, numerically, the influence of certain occupations upon health and the duration of life. Mortality-tables published in 1874 by the Massachusetts Bureau of Registration were analysed, and their results compared with those derived from European sources. The trades and occupations dangerous to health were briefly indicated.

The paper of Dr. Wyman concerned itself exclusively with the dangers and hardships of the oystermen engaged in the oyster-fisheries in the Chesapeake Bay. The rapacity and brutality of the employers, and the extremely hazardous nature of the occupation, were graphically described.

Dr. Alt referred to the numerous cases of ocular diseases attributable to mechanical injuries in certain occupations, especially stone-cutters. He proposes that employers be made pecuniarly liable for injuries sustained by workmen if these result from neglect of proper precautions which can be enforced by the former.

The President, Dr. A. L. Gihon, Medical Director United States Navy delivered a very brilliant address at the close of the first day's session. It was an eloquent appeal for more earnest personal interest in practical hygiene.

Among the papers read were several on adulterated and disease-producing foods. Dr. J. Cheston Morris, of Philadelphia, discussed "The Adulteration of Milk and Milk-supply of Large Cities." He recited the evils of impure and adulterated milk, and recommended that sealed glass jars should be used for the transportation of the milk. In this way the adulteration of the milk in transit between the producer and consumer could be guarded against. A simple method of testing the purity of the milk should be placed in the hands of the consumer, and in this way fraud on the part of the producer could be detected. Dr. B. F. Davenport, of Boston, showed how the inspection of milk had resulted in great improvement in the character of the supply furnished in the latter city.

Hon. Erastus Brooks, of New York, read an essay on "Food and Food Adulteration," in which the subject was well treated, and many statistics given showing the extreme extent to which many of the common articles of food and medicines are sophisticated.

Prof. V. C. Vaughan, of the University of Michigan, gave an account of an outbreak of cheese-poisoning recently observed in Michigan. Over three hundred cases of poisoning from eating cheese had occurred in that State within the past six months. None of the cases were fatal. The symptoms were those of intense gastro-intestinal irritation. The cheese which produced the morbid effects was excessively acid. A practical method of detecting the acidity was by the use of litmus paper, which any grocer or householder could apply. Excessive acidity of the cheese should arouse suspicion concerning its quality.

Dr. Charles Smart, United States Army, read a paper on the "Water-Analysis of the Future," in which the present defective methods were criticised. Dr. H. B. Baker, of Michigan, drew attention to the relation of the depth of the soil-water to the spread of typhoid fever in that State. This paper was Illustrated by charts which clearly showed the coincidence of a low ground-water level and increased prevalence of typhoid fever, and *vice versa*.

Dr. Joseph Holt, of New Orleans, described the new system of quarantine which it was proposed to introduce at the outlet of the Mississippi River. The system consists of absolute disinfection of passengers, baggage, cargo and ship, and only incidental detention. Dr. Holt's plan found much favor with most of the members. There can be no question of its superiority, if properly carried out, over any other system now in use.

Several interesting papers on "School Hygiene" and on "Cremation" were read, and both subjects referred to committees.

Dr. J. F. Hibberd, of Indiana, introduced a resolution providing for the appointment of a committee to investigate the subject of germicides, disinfectants, and antiseptics in their relations to preventive medicine, to formulate the result of their inquiries, and to submit the same at the meeting of the State Boards of Health, in Washington, on the second Tuesday in December. The committee was constituted for practical work, and consists of Dr. Geo. M. Sternberg, United States Army, chairman; Dr. J. H. Raymond, of Brooklyn; Prof. V. C. Vaughan, of Ann Arbor; Dr. W. H. Watkins, of New Orleans; Dr. Chas. Smart, United States Army; Prof. A. R. Leeds, of New Jersey, and Dr. George H. Rohé, of Baltimore.

Dr. James E. Reeves, of Wheeling, read a report of an elaborate sanitary survey of the Ohio River for the first one hundred miles of its course, and showed the relations of the river to the sewage-disposal and water supply of the cities and towns along its banks. Dr. E. S. Elder, of Indiana, read an extremely valuable report embodying the results of a sanitary survey of the school-houses of that State. It is very desirable that this sort of work should be continued. Measures of reform can only be intelligently introduced after the actual conditions needing reform are thoroughly understood.

The most important outcome of the meeting was the offer on the part of one of the members of the Association, Mr. Henry S. Lomb, of Rochester, to place two thousand dollars in the hands of a committee, to be distributed in prizes of the value of five hundred dollars each.* Mr. Lomb has also headed a subscription list with fifty dollars to defray the necessary expenses of the committee on disinfectants and antiseptics, above referred to. Mr. Lomb, who is known at his home as a practical philanthropist, is a member of the microscope manufacturing firm of Bausch and Lomb.

A notable feature of the meeting was the illustrated lecture by Dr. Geo. M. Sternberg, the distinguished mycologist, on "Disease Germs." For nearly two hours the lecturer held the attention of a large audience while showing various examples of innocent and pathogenic micro-organisms by means of micro-photographs and the magic lantern.

The officers elected for the ensuing year, are:

President.—Dr. Jas. E. Reeves, of West Virginia.

First Vice-President.—Hon. Erastus Brooks, of New York.

Second Vice-President.—Dr. H. B. Baker, of Michigan.

Treasurer.—Dr. J. Berrien Lindsley, of Tennessee.

Executive Committee.—Drs. H. P. Walcott, of Massachusetts; C. Smart, United States Army; G. B. Thornton, of Tennessee; D. W. Hand, of Minnesota, aud H. B. Horlbeck, of South Carolina.

Too much praise cannot be awarded to the local committee and the citizens of St. Louis for their active efforts to make the meeting pleasant and successful. All the clubs and places of interest were open to the members of the Association, the city was illuminated in their honor, and carriages were at their disposal for

* See CHRONICLE for November. Mr. Lomb has recently added $800.00 to his gift to be distributed as "second prizes" of $200.00 each.

rides through the city and parks. I should fail in my duty did I not mention the names of those largely instrumental in securing these advantages to the Association. They are Dr. J. G. Spiegelhalter, chairman, and Dr. Geo. Homan, secretary of the local committee. It was a matter of considerable comment, however, that the medical profession in St. Louis contributed but a small portion of the attendance at the session. The thought is forced upon one that St. Louis doctors take very little interest in sanitary progress. Another noticeable thing was that representatives from Chicago and Cincinnati were conspicuous by their absence. Can this be accounted for by local jealousies?

The next meeting will be held in Washington, in December, 1885.

CORSAIR.

Quinine Bisulphate.

The United States Army this year contracted for eight thousand ounces of bisulphate of quinine, and thus far has not bought any of the ordinary sulphate. The fact that the ready solubility of the bisulphate enables it to be dispensed in aqueous mixtures, as well as the equally well ascertained fact that this ready solubility renders its action more prompt and certain, are probably two of the chief reasons why this salt was given the preference. Outside the army the bisulphate has been steadily gaining in favor. It can be afforded at a price slightly lower than that of the sulphate, and. in equal doses, seems to be equally efficient, it contains from fifty-nine to sixty per cent. of alkaloid quinine, while the ordinary sulphate contains about seventy-five per cent. Should the experience of army surgeons be satisfactory, this soluble sulphate will probably be much more largely used in the future.—*The Druggists Circular.*

A Criticism from India on the Cholera Bacillus.

The *Indian Medical Gazette*, In the course of an elaborate review of Koch's work and discovery, says, "A review of the whole evidence brought forward by the German Cholera Commission shows that they have only succeeded in establishing the fact that a peculiar form of bacillus is normal to the intestines of cholera patients; but the exact part which this organism plays in the morbid process is left wholly undetermined. Only a very moderate degree of probability has been made out in favor of this bacillus being the cause of cholera; but the futility of trusting to probabilities and conjecture in etiological inquiry into cholera is generally well recognized. The problem, therefore, of the causation of cholera still remaining unsolved, it awaits and ought to receive that careful attention which its great importance demands." It is not fair to depreciate the value of Koch's discovery; but, on the other hand, it will do no good to give to it any greater weight than the evidence strictly justifies.—*Medical Record.*

The Elevation of a Quack.

Berlin medical circles are considerably disturbed over the elevation of a Dr. Schweninger, Bismark's *Leibarzt*, to a position in the Medical Faculty of the Berlin University. Dr. Schweninger, had no scientific or even social standing amongst the profession previous to his success with Bismarck, and it is affirmed that if he had presented himself for admission to the Berlin Medical Society he would have been rejected. He has advertised and applied a so-called "Schweninger-cure" for obsesity, fatty heart, etc. and it was with this cure that he captivated Bismarck. So it seems that even princes are not proof against the blanishments of quacks.—*St. Jo. Med. Herald.*

The Medical Chronicle.

A Monthly Journal for the Practitioner.

GEORGE H. ROHÉ, M. D., Editor.

☞ It is requested that all literary and business communications, books for review, exchanges, etc., be addressed to, and all checks, drafts and post-office orders drawn to the order of

DR. GEORGE H. ROHÉ,

Cor. Greene & Mulberry Sts., - Balto., Md.

BALTIMORE, DECEMBER, 1884.

EDITORIAL.

Pump wells as Sources of Drinking Water.

On a recent ride down town in one of the most extensively patronised lines of street cars, we counted within eight squares, seven pumps, all apparently in good working order, and constantly used by people as sources of drinking water. The readers of this journal are fully aware that it is almost impossible to keep such a source of water supply free from pollution in a city like Baltimore.

In the city of Brooklyn, the wells have nearly all been filled up on account of the serious contamination of the water, as ascertained by chemical analysis There remained, on August 27, 1884, only seven pump-wells in that city.* In Baltimore, where there is less excuse for the continuance of these reservoirs of liquid filth than in any other city throughout the country, this number of wells was found within the limited area above mentioned.

While commenting on the probable importation of cholera into this country, a few months since, we rather sharply called attention to the apparent neglect of the health department in this matter. We were afterward informed that the department had no control over the pumps, and that the authority for removing them under certain contingencies was vested in the City Commissioner, or some other city official. So far as we understand the ordinances on the subject, the health department seems to have been little less derelict than other bureaus of the city government.

The history of Asiatic cholera in the past, makes it more than probable that it will within the next year invade this country. All physicians know the rapidity with which this fatal pestilence is spread through contaminated drinking water. Our magnificent public water supply is almost absolutely removed from the danger of contamination, except through defective hydrants. There is, hence, no valid reason why a single pump should remain within the city limits of Baltimore. The continued toleration of these sources of disease is a reproach to the city, and a disgrace to those who are responsible for it.

Should cholera, unhappily, become epidemic in this city, we shall watch with especial interest its course among those persons who draw their supply of drinking water from the pumps, and possibly a large death-list may enable the responsibility to be placed where it belongs, either upon legislative stupidity, or official neglect.

* Report of the Commissioner of Health to the Common Council on Pump-wells and Well Water in Brooklyn.

CURRENT LITERATURE.

The Elements of Physiological and Pathological Chemistry. A handbook for medical students and practitioners. By T. Cranstoun Charles, M. D. Henry C. Lea's Son & Co., Philadelphia.

We do not know of any other modern work on physiological chemistry which we could more highly recommend than the one before us, to all those who will enter fully into the study of this science or who are in need of a good work of reference.

A full understanding and thorough knowledge of physiological chemistry is no doubt an important feature of a good medical education, and it is to be regretted that most of our medical colleges do not devote as much time to this branch as it deserves; where, however, physiological chemistry is fully taught, this book will be found to be an excellent text-book for students.

The work is divided into four parts: the first one, "nutrition and foods," gives a clear and full account of all the various groups of substances or individual bodies which are used as food; the second considers digestion and the secretions concerned; the third treats of the tissues, organs and remaining secretions; the fourth, of the excreta, feces and urine.

The author shows throughout the whole of the work that he is familiar with the latest researches and facts bearing upon the subject, and has accumulated all that is of importance in his book.

All substances which are of any interest to the physiologist are fully considered from a chemical point of view; their occurrence, formation or preparation, properties and tests are fully stated. In order to make the book also valuable as a guide to laboratory work, much stress has been laid on the details of analysis, and the first pages are even devoted to a consideration of the general methods of chemical operations.

Transactions of the Louisiana State Medical Society, 1884. New Orleans, 1884, Dr. P. B. McCutcheon. secretary.

The most notable thing about the transactions of the Louisiana State Association is the small number of original papers contributed, there being only three. There are, however, several reports and addresses of value and interest. We trust the next volume will be at least double the size of the present one.

Report of the Commissioner of Health to the Common Council on Pump-wells and Well-water in Brooklyn, 1884.

In an elaborate report to the Common Council of Brooklyn, Dr. J. H. Raymond, Health Commissioner of that city, has presented evidence to show conclusively the pernicious character of the pump water in use. Owing to the persistency of Dr. Raymond, the Council finally abolished all but seven wells, of which two have been reported as unfit to be used as sources of drinking water. On another page we have called attention to the use of the water from pump-wells in this city, and have urged the removal of these unquestioned sources of disease. We hope ere long to be able to chronicle an equal advance in practical sanitation here, as has been gained in the city of churches.

Transactions of the Medical Society of West Virginia, for 1884., Wheeling, W. Va., 1884. Dr. Jepson, secretary.

A pretty full abstract of the work done at this meeting of this society was given in the CHRONICLE of last June. The papers read were were of good quality and practical in tendency. The publishing committee might, however, have exercised the pruning hook to advantage before passing the last article in the volume to the printer. The volume lacks both table of contents and index.

Second Annual Report of the Provincial Board of Health of Ontario, Canada. Toronto, 1884, Dr. P. H. Bryce, secretary.

Our neighbors across the northern border are exhibiting an active interest in the progress and diffusion of sanitary knowledge, as this volume abundantly attests. With an excellent health organisation, composed principally of men who have made a thorough study of the problems of sanitary science, they combine the

excellent plan of holding sanitary conventions, after the manner of the States of Michigan, Maryland and Kentucky, and thus disseminating among the public the knowledge gained by individual study and experience.

This report is well-gotten up and its contents are full of value to the physician and practical sanitarian.

Bacteria. By George M. Sternberg, M.D., F.R.M.S., major and surgeon, U. S. Army; member of the Biological Society of Washington, etc., and Dr. Antoine Magnin, Licentiate of Natural Sciences, etc. Illustrated by photo-micrographs and wood-cuts. Second edition. New York: Wm. Wood & Co., 1884.

The excellent manual on the bacteria, by Dr. Antoine Magnin, which was translated by Dr. Sternberg a few years ago, filled a want long existing in the English literature of this interesting subject.

In the present edition, very large and important additions have been made by Dr. Sternberg, who has contributed more than two-thirds of the text. The book is therefore really much more than a new edition; it is a new work.

Parts one and two, containing chapters on the morphology, classification, description, development and reproduction of bacterial organisms are the work of Dr. Magnin, and are here reprinted from the translation of 1880. The remaining portion of the book, (parts three to six,) is from the pen of Dr. Sternberg, and gives a full and accurate account of the methods of cultivation, recognition, staining, photographing and collection of bacteria for examination, attenuation of virus, germicides and antiseptics, the role of bacteria in infectious diseases and surgical lesions, and a complete bibliography. Dr. Sternberg's experience as an original worker in the field of micro-mycology gives him the right to speak with authority on many of the points coming under discussion in the course of the work. The opinions expressed will be found to be, in all cases, the outcome of a thorough study of the matter. Where so much is still uncertain, as in the doctrine of the germ origin of diseases, Dr. Sternberg will be found a pretty safe guide out of the maze of contradictions.

The illustrations of most of the zymogenic and pathogenic organisms are heliotype reproductions of photo-micrographs made by the author.

The book deserves the careful study of those who desire the most recent information on the relation of micro-organisms to diseases.

Transaction of the Michigan State Medical Society, for 1884. Lansing, 1884. Dr. Geo. E. Ranney, secretary.

The annual volume of transactions of the Michigan State Society always contains papers of interest and value. The volume for 1884 is no exception to the rule. One of the most practical paper in it is by Prof. A. B. Palmer on prostatic hypertrophy and urinary obstructions, in which is detailed a very simple method of overcoming obstruction to the outflow of urine resulting from prostatic hypertrophy.

Lindsay and Blakiston's Visiting List for 1885.

The handy size and convenient arrangement of this well-known visiting list are so thoroughly appreciated by all who have once read it that we need merely call the attention of our readers to the new edition, which is now ready.

Lock-jaw in Infants (Trismus Nascentium). By J. F. Hartigan, M. D. New York. Bermingham & Co. Pp. 123.

The author adopts the views of the late Dr. J. Marion Sims on the causes of trismus nascentium, and gives in this little brochure the details of 43 cases and 150 autopsies.

FLOTSAM.

SUBSCRIBE FOR THE MEDICAL CHRONICLE. ONLY ONE DOLLAR PER ANNUM.

READ THE ANNOUNCEMENT OF ROHÉ'S TEXT-BOOK OF HYGIENE, AMONG THE ADVERTISEMENTS.

BROMIDE of potassium and deodorized tincture of opium in combination, half a dram of the former and one-third of a grain of the latter, is said to be almost a specific in migraine.

AN apparently authentic account is given of the birth of four living male children by a woman named Mrs. W. H. Pullman, who resides near Eureka, Mo. The mother had previously given birth to triplets.

PROF. PARVIN condemns a free opening and quick evacuation for imperforate hymen, as it caused death in a case in which it was made by him. [Very remarkable that any patient should die while under Parvin's care.]

HAMMOND claims success with the following combination in the treatment of impotence: ℞: Strychninæ sulphatis, gr. j; Acid phosphoric dil. ʒ j. mix and take ten drops in a teaspoonful of fluid extract of coca, three times a day, before meals.

DR. PROUST, Inspector-General of the Sanitary Service of France, thinks the extension of the present cholera epidemic in France and Italy, demonstrates the futility and danger of cordons sanitaires, and the necessity for the rigorous application of hygienic measures.

PRIOR and Finkler claim that they have found an organism similar to that of Koch's comma bacillus in the stools of "cholera nostras." Specimens of this bacillus have been shown to Koch, who pronounces it similar to the cholera bacillus.

THE Supreme Court of West Virginia has decided the law relating to the regulation of the practice of medicine in that state to be constitutional and valid. The quacks have now no show there, unless they secure a repeal of the law by the legislature.

THE World's Cotton Exposition in New Orleans to begin this month, promises to be no insignificant affair. The meeting of the American Medical Association will be held in the Crescent City during the last week in April, thus permitting all those attending the meeting to "take in" the Exposition at the same time.

WE have always been in sympathy with the movement in favor of cheap literature, cheap in price, not in quality. One of the pioneers in the movement is John B. Alden, 393 Pearl street, New York, who is now publishing some of the solidest works in general literature, at prices absurdly low. Send a postal card to him for a catalogue.

WE are now using with much satisfaction one of the handsome and comfortable phætons from the establishment of R. F. Briggs & Co., 53 W. Fayette street, Baltimore. No doctor need sit in a cramped up position in a stiff springed, straight-backed vehicle, when he can obtain a stylish, easy and durable buggy or phæton for about one-half the price charged by ordinary carriage builders.

MESSRS. G. P. Putnam's sons, the prominent publishers of medical works, have in preparation a translation of Prof. Meynert's treatise on Psychiatry. Prof. Meynert is well known to Neurological specialists as one of the most eminent contributors to the literature of that branch of medicine, and the book now announced may be expected to take a leading position among the works of its class.

SUBSCRIBE for the CHRONICLE.

The Medical Chronicle.

BALTIMORE, JANUARY, 1885.

ORIGINAL ARTICLES.

ARTICLE I.

THE MEDICAL AND LEGAL DEFINITION OF INSANITY.

BY A. B. ARNOLD, M. D.

Prof. of Clinical Medicine and Diseases of the Nervous System, College of Physicians and Surgeons, Balto.

In consulting the medical literature on mental diseases it will be found that the attempts to construct a scientific definition of insanity have invariably miscarried. Although the labors of neurologists and alienists of the present day have greatly added to our stock of knowledge in the department of psychiatry, yet the basis upon which an exact definition of insanity must rest is still wanting As long as its morbid anatomy remains undetermined we must be contented with hypotheses concerning the pathological changes that underlie the phenomena of mental alienation. Strictly speaking insanity, like pain or spasm, is only a symptom. With the exception of paralytic dementia we cannot in our present state of knowledge trace mental disorders to a destructive cerebral lesion. For instance, the two classical forms of insanity—melancholia and mania—which differ so widely in their clinical features, must be assumed to depend on corresponding differences of morbid alterations of the brain, but to this hour nothing definitely is known in what these differences consist. Practically, in regard to diagnosis and treatment, matters stand better for the medical man, but when called upon to give a categorical answer to the question, what he understands by insanity he lacks that exact imformation which would lend precision to the terms of his definition. It is owing to this cause that even the happiest choice of language, well guarded by proper qualifications failed to render acceptable any of the numerous definitions of insanity that have heretofore been proposed. None of them it seems can stand the the ordeal of a sound criticism. In illustration I will quote the one which bears the authorship of no less an eminent specialist than Dr. Maudsley, "Insanity," he says, "is a morbid derangement, generally chronic, of the supreme centres—the grey matter of the cerebral convolutions, or the intellectorum commune—giving rise to perverted feeling, defective or erroneous ideation and discordant conduct, conjointly or separately, and more or less incapacitating the individual for his due social relations." As if aware that this definition requires an explanation, he adds: "a man may certainly have disordered feeling, may think and judge erroneously, and act extravagantly, without being insane; but if he does so as a regular thing and without adequate cause in external circumstances—if he does so in fact by reason of a steadily acting internal cause of derangement of his supreme cerebral centres—he is insane."* The main objection to this definition is the want of anatomical proof of the said derangement of the cerebral centres.

Dr. Spitzka, in his recently published work on insanity, expresses the hopelessness in our present meagre knowledge of the pathology of the brain in insanity to give a scientific definition of this term. In its place he devotes a lengthy paragraph to the description of the principal phen-

*Reynolds' System of Medicine, Vol. II, p. 7.

omena of insanity and mentions certain morbid manifestations of an allied character which must be excluded. In fact all the medical definitions of insanity have the fault of being either too wide or too narrow, or the ambiguity and vagueness of the language in which they are expressed render them useless. A brief reference to the legal defintion of insanity which obtains in English and American courts of law will show analogous shortcomings.

Dr. Bucknill in a recent number of the Medico-Legal Journal* discussing the relation of madness to crime gives an account of the declaration of the law of insanity which has the approval of the highest legal authorities in England.

It reads thus: "If a man when he commits an offence is capable of distinguishing right from wrong and is not under the influence of such a delusion as disables him from distinguishing that he is doing a wrong act, he is answerable to the law." Under this ruling much injustice has been committed, for how can any one, or any jury tell whether the accused at the time he did the criminal act could discriminate between right or wrong. This and other obvious objections were felt to be so strong that many able judges modified the interpretation of the law namely, that it is not mainly for the jury to consider whether the prisoner knew right from wrong, but whether he was at the time he committed the offence deranged or not." In 1843 an amendment act was passed by Parliament which embodied the unanimous opinion of fifteen judges, all of acknowledged ability and distinction. This declaration of the law has since been the basis of decision in all proper cases in the United States as well as in England., It says; "To establish a defense on the ground of insanity it must be clearly proved, that at the time of committing the act, such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or if he did know it, he did not know he was doing what was wrong." The law as it now stands has been severly criticised both by lawyers and medical men. If a person according to this law committed an aggressive act, although it be proved that he acted under a delusion, he is held responsible if he knew he was doing wrong. Now it is an established fact that insane people commit criminal act under the influences of delusion, that overcome their scruple, the delusion being stronger than the conviction that the act is wrong. On the strength of this law innocent people can be hanged. Baron Branwell said in reference to this law: 'I think that although the present law lays down such a definition that nobody is hard-the accused was laboring under ly mad enough to be within it, yet it is a logical good definition." But it has been asked how can a definition be logical if it includes nobody.

The substantial results of neurological investigations of recent date modified and changed many current views in relation to the nature of mental diseases, and in consequence an agitation was set on foot in England for the purpose of altering the traditional law of insanity in conformity with the enlarged knowledge that had been obtained, bearing on that subject. Justice Cockburn held the following language in reference to an amendment which was proffered in 1874. "I concur," he said, "most cordially with the proposed alteration of the law, having been always strongly of the opinion, that as the pathology of insanity abundantly establishes, there are forms of mental diseases, in which, though the patient is quite aware, that he is about to do wrong, the will becomes overpowered by the force of an irrisistible impulse." Clinical experience had long before this taught the alienist that the law of insanity as

*November, 1884.

interpreted in England and the U. S. was altogether untenable. Insane patients are known to exhibit a degree of ingenuity and forethought in devising and carrying out their mad pranks "worthy of a better cause." They invent plausible reasons in extenuation of their aggressive acts which are calculated to deceive the inexperienced. The very fact that unruly inmates of insane asylums are controllable by a system of rewards for good behavior demonstrates that many of them are amenable to what has been called "moral therapeutics."

An eminent judge of the English bench hit the nail on the head, when in a recent murder case, in which the plea of insanity was set up by the defense, he declared that the test of unsound mind rested on the answer to the question. "Could the prisoner help it?" This really contains the whole gist of the matter, for the very incapacity due to a morbid state of the mind, to resist mad impulses, or the abeyance or absence of the normal mental influences which control and regulate the will, constitutes the essential feature of insanity.

It is certainly of immense importance to the security of society that an undue latitude should not be allowed to the meaning of insanity. The plea of insanity has undoubtedly been much abused of late for the sinister purpose of screening criminals. It has come to pass, that mere outbursts of passion, corrosions of remorse and other emotional disturbances that led to criminal acts are sought to be placed under cover of insanity. The community is not yet prepared, however, to believe that the dangerous classes of society are all of unsound mind. As the natural result of the alarm which the easy mode of acquitting criminals on this plea, has created, an extreme reaction seems now to be setting in. This was exemplified but a few weeks ago in the case of a man by the name of Beach, of the State of Pennsylvania, who murdered his wife without any apparent motive. It was shown on the trial that the prisoner came from a family saturated with insanity. The prisoner's grandfather was a lunatic, his elder brother insane, another brother very eccentric, and a third imbecile. His sister's eldest son died in a lunatic asylum. His mother was the sister of a madman. In the teeth of this evidence the jury returned a verdict of murder in the first degree, and what is most surprising a motion for a new trial has just been denied and the date of the execution fixed. As another evidence of the little importance which is beginning to be attached to expert testimony in cases of alleged insanity, I would advert to a recent trial in our city in which medical experts gave their professional opinion on the state of the prisoner's mind at the time he made the fatal assault. One of the counsel in the case had the impertinence to declare, that he cared little for expert testimony. This disparagement of medical opinion can easily be accounted for when we take into consideration the practice which is in vogue in our courts, in the mode of procuring experts. Juries can hardly overcome the suspicion that experts who are engaged and paid by the interested parties are biased.

In this connection I am tempted to cite the opinion of Mr. George B. Corkhill, United States Attorney for the District of Columbia, who took part in the Guiteau trial. In a paper read before the Medico-Legal Society of New York on Insanity as a defense for Crime, he says: "My candid opinion resulting from a very large experience in the trial of these cases, is that when a person proposes to defend his crime on the ground of insanity, a jury especially selected for their fitness should be chosen to try the special plea; and if the person be found insane, then he should be confined in an insane prison for a time commensurate with the character of the crime; and if the verdict of the jury be in favor of his sanity, then

the plea should not be allowed on the trial of the case."

A practice prevails in our courts in the trial of cases of this description which appears to me highly objectionable. The opposing lawyers agree to make up a hypothetical case on which the expert is required to pass his judgment. Lawyers who have no practical acquaintance with insanity are assuredly not fitted for the task which requires knowledge of a special order. And then again, the rules of evidence which obtain in courts of law, and which the opposing counsel will not allow to be infringed upon to the prejudice of their cause, are calculated to suppress rather than to bring out points of information which may be of capital importance to the medical expert.

The very irrelevant question is often put in these cases to the expert, whether he thinks the prisoner responsible for the act he has committed. It has been truly said that responsible means punishable, and it is a foregone conclusion that if the prisoner is insane, he is not responsible; and if he is sane, he is responsible.

In conclusion, I shall cite the definition of insanity which has been proposed by Dr. Bucknill. It appears to me to be acceptable both from a medical and legal point of view. It is thus formulated: "Insanity is incapacitating weakness or derangement of the mind, caused by disease."

CORRESPONDENCE.

Leaves from a Country Doctor's Diary.

Editor Medical Chronicle.

SIR:—It requires but a short time for the progressive physician to learn that originality is one of the first laws of medicine, and he who puts his trust in text-books to the exclusion of observation and research in nature's storehouse will often be confounded and put to shame.

Young men as they gaze over the fields where they are expected to gather their sheaves of knowledge are inclined to the opinion that their profession is a selfish one, and it is true that what men obtain by patient toil and sacrifice they do not care to proclaim on the housetops. With a great price is success purchased, but a more potential reason for silence is the proverbial modesty of our calling. Modesty is a most excellent virtue, but has it made many reputations since the days of Hippocrates?

With the consent of the editor it is my design to let the readers of the CHRONICLE know how the world wags up in this section of Pennsylvania. Perhaps some of my 150 classmates can parallel the following case in their own experience.

In the latter days of August, 1884, Mrs. H. was living at Port Alleghany; her husband was the proprietor of a billiard saloon which one night caught fire and burned to the ground. The family succeeded in saving themselves with the clothes they had on their backs, and came over into Cameron county, where the woman was confined and delivered of a healthy female child weighing about ten pounds.

A physician was not in attendance at the advent of the stranger, but three weeks afterward the writer was called on by the husband—after dark of course.

On our way I sought to beguile the tedious and tasteless hours by questioning my companion as to the location of our destination, and he informed me that it was only a mile or so up "Four Mile Run," or about three miles and a half, which might have been correct for a coon, but for a doctor was a reckless application of arithmetic.

I found the patient in an exhausted condition, appetite and strength gone, pulse 60 and very feeble, tongue heavily coated with dirty white fur, lips the color of dead ripe cherries, skin sallow and dry, temperature 100°, urine porter colored, bowels constipated. Ever since her confinement

she had been troubled with uterine hemorrhage, but when an examination was suggested, the patient's mother, a terror to all evil doers and youthful doctors, held up her hands in holy horror at the idea of an unmarried and a young man thinking of such a thing. That settled it, for the boldest doctor dares not gainsay an old midwife when she happens to be monarch of all she surveys.

Ergot and iron were prescribed for the hemorrhage, and a laxative for the bowels. My tentative diagnosis was subinvolution, but in the light of future development I saw that that was a provoking error. The next morning the flowing had ceased, but the case had now transformed itself into a full blown attack of malignant jaundice, the woman's skin and eyeballs were frightfully icteric, and even the mucous surfaces were stained with bile pigment. The trouble was evidently congestive, as a distinct history of a chill, followed by an abnormal rise of temperature was obtained. A sinapism was applied over the abdomen, to remain until the surface was thoroughly reddened, then to be removed and reapplied when the redness faded. Four powders of calomel and jalap, two grains of the first and four of the second were given at intervals of three hours, and the nurse ordered to assist matters with an injection, if necessary, at the end of twelve hours. The next morning the patient was evidently not much better, nausea and vomiting had come on, there was intense headache, acute paroxysmal pain in the hypochondrium and epigastrium, irregular thirst, and a semi-comatose condition. The injection which had been ordered had just been given and in the course of an hour brought away with it an immense quantity of fecal matter. Almost instantly the woman was better, and shortly called for a raw egg. Nothing but a little whiskey was given her the rest of the day, and that night she enjoyed sound and refreshing sleep. In the morning she was ordered to commence the use of the following:

℞ Acid nitro muriatic, gtt. c.
Syrup, f ʒ iii.
Vin pepsin, f ʒ i.
M. sig.: ʒ i. every four hours.

Recovery was prompt and permanent, and what interests me is to find out whether or not the ergot and iron she took in the commencement of the attack was the means of bringing things to a climax, and also how much good the injection really accomplished.

E. W. FREE, M. D.
Emporium, Pa.

ANALECTS.

Needless and Useless Coughing.

An exchange quotes the following from the British Medical Journal: There is in the world a great deal of what I am accustomed to call "needless, useless coughing." Where secretion takes place in the bronchial tubes, it must sooner or later be brought up; and for this purpose some "necessary" coughing must take place, or the patient will choke. But, both in organic diseases and in slight inflammatory or irritative affections of the air passages, there is often an immense amount of useless coughing,—useless, that is, as regards bringing up any laryngeal or bronchial secretion, and far worse than useless, because it wears out the patient, prevents sleep, and moreover, increases the condition which gives rise to it inasmuch as it lets the affected parts have no rest or peace. Now, the effects of opium are both local and general; and if in mucilage of acacia, or tragacanth, or in glycerine, or with a thickening solution of confection of dog-rose or honey, you give frequently from the one-fortieth to the one-twentieth of a grain of morphia, you not only give a marvelous amount of peace and comfort to your patient, but, where it is remediable, you tend also to cure the disease. A favorite

formula of miue, varied according to circumstances, is:

℞ Acetate of morphine, 1½ grs.
Nitric acid, dilute, 1½ drs.
Oxymel of squill, 6 drs.
Mucilage of acacia, 2½ oz.
Glycerine, 2 drs.
Syrup of red poppy, 2 oz.

Cinnamon or rose water sufficient to make the whole equal six ounces.

M. To take one or two teaspoonfuls five, six or seven times in the twenty-four hours.

The coughing in pertussis may be similarly relieved.—*Weekly Medical Review.*

The Clinical Forms of Hepatic Colic.

Among the painful affections of the abdominal viscera few are more distressing, and oftentimes difficult to relieve, than the various forms of hepatic colic.

Dr. Olive, of Paris, has recently made a study of hepatic colic, from a purely clinical standpoint, a review of which is published in the *Journal de Medicine*, October 18, 1884. Among the principal causes of hepatic colic he finds arthritism, with its various manifestations, such as obesity, diabetes, and calculus; forced repose, sadness, sedentary occupations, abuse of alcohol, a diet too exclusively animal or fatty, and different chronic affections of the liver also invite colic.

The immediate determining causes are those which prodnce violent jars to the abdominal organs, such as horse-back riding, the jolting of vehicles, and the like.

The author describes a form of colic which he terms pseudo-gastralgic-hepatic colic, which he differentiates from gastralgia by the following characteristics:

The patient suffering from gastralgia has more frequent pains, and would not go for three or four months without suffering, as the pseudo-gastralgic patient often does. Gastralgia causes distress when the stomach is empty, and at or just after a meal. The time for pseudo-gastralgia to appear is usually about two hours after eating.

The pains come on suddenly in hepatic colic, less so in gastralgia. They radiate toward the shoulder in hepatic colic, but not in gastralgia.

Still there may be a reflex intercostal neuralgia accompanying the latter affection. After hepatic colic, even without icterus, the urine is commonly red, and contains biliary pigment. This is never the case in gastralgia pure and simple.—*Med. Record.*

Dobell's Treatment of a Cold.

Dr. Mulheron recommends the following treatment of a "common cold," as first advocated by Dr. Dobell, of London, England, viz.:

1. Give five grains of carbonate of ammonia and five minims of liquor morphiæ (B. P., morphiæ gr. one-sixth) in an ounce of almond emulsion every three hours.

2. At night give one and a half ounces of spiritus Mindereri in a tumbler of cold water after the patient has got into bed and been covered up with extra blankets. Cold water should be drunk freely when there is thirst.

3. In the morning the extra blankets should be removed so as to allow the skin to cool down before getting up.

4. Let the patient get up as usual, and take his usual diet, but continue the ammonia and morphia mixture every four hours.

5. At bedtime the second night give a compound colocynth pill. Usually about twelve doses of the mixture will be sufficient; but if there seems to be a tendency to a recurrence of the catarrhal symptoms it is well to administer six more doses and a second pill at night.

The beauty of this treatment lies in the fact that it does not interfere with the patient's business, and does not expose him to fresh attacks of cold which are liable to follow exposure to the outer air after a course of hot, stimulating, diaphoretic drinks.—*Med. Age*, October 10, 1884.

Weight as an Indication in Life Insurance.

Dr. Joel Seaverns draws the following conclusions from a careful study of the records of examination of the nearly 50,000 members of the Royal Arcanum, and the returns of death concerning 974 members who have died: that for life insurance purposes men whose weight is above that laid down in the usual tables are better risks than those whose weight is less; that among the latter—light weights—the usual variation of twenty per cent., which is assumed to be within safe limits, is not safe, and that if we accept men, especially young men, whose weight is fifteen per cent. below the standard, we are approaching dangerous standing ground, and inviting, as it were, deaths from phthisis and wasting diseases, and when we reflect how great is the mortality from phthisis in all insurance organisations we cannot too strongly emphasise the necessity of constant vigilance in this direction and of not only exploring most carefully the chests of such men, but also of taking into account all these other features which I think often precede the changes in lung tissue discernible by the ear and which can be observed at what may be called the pretubercular stage.

With the heavy weights it is different; free from danger of phthisis, we must, to be sure, take the greatest care to see that the heart and kidneys are healthy and that the family history does not point to cerebral disease. With these points well guarded, I am satisfied that an excess of twenty-five per cent. in weight is not dangerous in men who have not injured or are not injuring themselves by alcohol.—*Boston Med. and Surg. Journ.*

The Therapeutic Properties of Buttermilk.

Buttermilk, so generally regarded as a waste product, has latterly been coming somewhat into vogue, not only as a nutrient, but as a therapeutic agent, and in an editorial article the *Canada Lancet*, some time ago, highly extrolled its virtues. Buttermilk may be roughly described as milk which has lost most of its fat and a small percentage of its casein, and which has become sour by fermentation. Long experience has demonstrated it to be an agent of superior digestibility. It is, indeed, a true milk peptose, that is, milk already partially digested, the coagulation of the coagulable portion being loose and flaky, and not of that firm, indigestible nature which is the result of the action of the gastric juice upon sweet cows' milk. It resembles koumiss in its nature, and, with the exception of that article, it is the most grateful, refreshing and digestible of the products of milk. It is a decided laxative to the bowels, a fact which must be borne in mind in the treatment of typhoid fever, and which may be turned to advantage in the treatment of habitual constipation. It is a diuretic, and may be prescribed with advantage in some kindey troubles. Owing to its acidity, combined with its laxative properties, it is believed to exercise a general impression on the liver. It is well adapted to many cases where it is customary to recommend lime-water and milk. It is invaluable in the treatment of diabetes. either exclusively or alternating with skimmed milk. In some cases of gastric ulcer, and cancer of the stomach, it is the only food that can be retained.—*Med. Herald.*

Opening of the Gall-Bladder and Duct.

The current number of the *Independence Belge* mentions a great surgical operation which has just been performed in Brussels by Dr. Langenbuch, of Berlin, who must not, however, be confounded with his eminent fellow citizen, Langenbeck. The subject of this daring and successful proceeding was M. Eugene Anspach, the Deputy Governor of the National Bank of Belgium, who has been for many years suffering fr m a collection of gall-stones, which

have kept him in a state of aggravated suffering (*douleur atroce*), and have latterly defied all measures of relief. M. Langenbuch, summoned specially from Berlin, proposed to lay open the gall-bladder, with antiseptic precautions, admitting, however, that he had only performed this operation four times, and that but one of these cases recovered. M. Anspach's family and friends were much dismayed at this announcement, and begged that the operation should not be performed. M. Anspach was firm, and reflecting that without it he would not live long, and that in the meantime his life would be worse than death, decided on the operation. Even at this supreme moment the banking mind asserted itself, and M. Anspach remarked, "After all, one in four is twenty-five per cent., and that is a fine dividend." "You have had one recovery already, doctor," he remarked, "and I will be the second," an element of confidence which no doubt had something to say to the result. The operation was performed on the 9th of September, and 125 calculi were extracted from the gall-bladder. M. Anspach suffered a good deal after the proceedings, but is now out of danger and in complete comfort. We trust he will long live to enjoy the reward of his own pluck and of the skill of his surgeon. It is a curious circumstance that this operation has to a certain extent been anticipated here. The late Sir Timothy O'Brien suffered from gall-stones, and the late Sir Dominic Corrigan worked down into the gall-bladder by means of a potash issue, and removed them. Sir T. O'Brien's recovery was complete.—*Medical Record.*

Treatment of Diphtheria with Vapors of Crude Turpentine and Norway Tar.

Dr. E. Masson reports a case of diphtheria treated successfully by Delthil's method,—*i. e.*, keeping the patiently constantly in an atmosphere impregnated with vapor of coal-tar and turpentine, produced by throwing these agents on hot coals. Not having coal-tar, Dr. Masson substituted Norway tar and crude Venice turpentine. The two were mixed in equal proportions, and were placed in the same receptacle over an alcohol lamp. The vapors immedietely commenced to come off, and the fumigation was kept up day and night until the child 5 years old, recovered, after more than eight day's illness. The good effects were not very evident until the fourth day, when the false membrane disappeared; but the fumigation was kept up for five days longer, when treatment was finally discontinued. Although iron and potassium chlorate were used conjointly, the author attributes the favorable result mainly to the tar and turpentine.—*Rev. Med. de la Suisse Romande.*

Advice to Medical Students.

At the opening of the summer session of the Cork Fever Hospital, Dr. T. B. Moriarty delivered an address to the students, from which we take the following:

"I fear an opening lecture of this kind would be considered incomplete if we did not give you some advice as to how you can best avoid catching fever. We have hitherto been so far fortunate that no student contracted contagious disease during the period of his attendance; and we can for this reason say to you, as we did to them, with greater confidence: Never try to beat up against time. Get up early and come here leisurely, after a good breakfast; and do not for any reason venture into the wards with an empty stomach, or in a heated condition, or at a time when your health is lowered by severe study or over-exertion. Remain in the wards as long as your duty only will require; and be careful when you are examining a patient not to inhale his breath; and also avoid dirty smells, observe extreme cleanliness, and wash your hands frequently.—*M. and S. Rep.*

The Treatment of Sprain by the Elastic Bandage.

This method of treating sprains has recently been reccommended by Marc See. It is the only method which fulfills the indications :

1. To cause as rapid absorption as possible of the blood extravasated around the joint (a lesion which controls all the other symptoms, such as pain, swelling, difficulty of movement, etc.)

2. To favor cicatrisation of the torn ligaments and ruptured parts by complete immobilisation.

The antiphlogistics and blood-letting, formerly advised by Hunter and Guersant, only partially fulfill the for mer indication. There is the same objection to the movements which Ribes and Bonnet advise for the injured joint. The refrigerants and cold-water baths advised by Baudens cause contraction of the tissues around the joint and dispel the inflammation, but they are not favorable to the absorption of the infiltrated fluids. Even massage, though superior to the other remedies just mentioned, fulfills only the second indication; furthermore, it is inconvenient and requires much patience and time, and between the seances of manipulation the swelling reappears and the pain returns. It is true that massage has the advantage of removing the extravasated materials from the region of the joint toward the more vascular portions of the limb, where they are more easily absorbed. But the elastic bandage has this advantage in a greater degree, since its action is continuous. Finally, and above all, it favors immobilisation of the joint, which is impossible during massage, and without which it is almost impossible to get cicatrisation of the torn structures and complete recovery in sprains of any intensity. The bandage should be applied to the skin itself, care being taken to fill up the flat and depressed places with wadding, so as to give a uniform surface around the joint for the bandage to act upon.

Extra Uterine Pregnancy.

In his address on Obstetrics and Gynecology before the New York State Medical Association, Dr. T. G. Thomas said :

Although the subjeet of extra-uterine pregnancy has attracted attention from the earliest days of medicine, it is only of late years that it has been carefully studied, its diagnosis put upon a firm basis, and its treatment systematised. Laparotomy, with its wonderfully beneficent results, has been brought to bear upon these cases, before and even after rupture of the vicarious and fœtal nest. By this procedure, Jessup, of England, has succeeded in delivering at full term, a child developed in the peritoneal cavity, and saving at the same time the mother ; and by it Tait, of the same country, has saved four women after the fœtal sac has ruptured. But it is to the fœticide powers of the electric current, first used by Allen, of Philadelphia, and then by Landis and Reeve, that the safety of such cases can best be trusted. This method is harmless to the mother, even if an incorrect diagnosis be made, and effectual in producing fœtal death if the diagnosis be correct. The number of lives which have already been thus saved is qnite large and is daily increasing. And these are lives which in former times would have been sacrificed to inattention, or want of power in diagnosis, or a lack of reliable remedial measures, even if diagnosis were rendered pretty certain.

A New Idea and an Original Treatment.

A physician after examining a hurt with a great deal of care, very gravely assured the friends that the bone was not broken, it was only fractured. On another occasion having a case of paraphimosis brought to him he prescribed a poultice. We scarcely know which the more excited our amazement, the ignorance of the physician or the credulity of his patrons.—*Miss. Val. Med. Monthly.*

Ipecacuanha in Cholera.

Dr. A. A. Woodhull, U. S. A., writes to the *Phil. Med. Times:* I take occasion to say to those interested that the quieting effect of ipecacuanha in cases of severe intestinal pain, with and without gastric and intestinal disturbance, continues a matter of frequent experience. It is particularly in cases where there is no mechanical irritant that its usefulness is best shown. The diarrhœa and vomiting induced by offending ingesta, of course, require their removal as a preliminary step. But there are numerous cases of severe enteric suffering where there is no such foreign body, or where it has passed away leaving this nervous disturbance. And many of the severer cases of cholera morbus, at least by the time a physician sees them, have no mechanical cause present. The agonising abdominal pain so frequent in the warmer season, and depending especially upon intangible causes, and this whether vomiting be present or not, will yield with greater promptness to large doses of ipecacuanha carefully given non-emetically than to any other treatment that is familiar to me. I do not deny that vomiting directly depending upon the drug sometimes comes on; but even in such cases it is less distressing than the pathological state it supersedes.

I do not believe that ipecacuanha is a sedative in the therapeutical sense of that word. It is a sedative to the patient in allaying his suffering and calming his distress, but I believe it accomplishes this by stimulating, not depressing, the organic nerve whose loss of power is the pathological cause. It is on this ground, as more fully explained elsewhere, that I think similar treatment may be as serviceable in true epidemic cholera as it has been found to be in the endemic cholera morbus.

THE next International Congress of Hygiene will be held in Vienna in 1886.

The Exploring Needle Folly.

The tubular needle furnished with all hypodermic syringes is a far better instrument for exploration than the grooved needle called an exploring needle, and has the additional advantage that it can be used with the syringe attached, which, when so employed, becomes a small aspirating pump. The exploring needle should be discarded from all pocket cases, and substituted by the hypodermic syringe, which is needed also for subcutaneous medication.—*Polyclinic.*

How to Administer Santonine.

Kuechenmeister has shown that lumbrici lived in a mixture of albumen, santonine and water, but they succumbed in a few minutes in an oily mixture of santonine. Experience has proven the necessity of direct contact. Santonine powder or troches are not a good way of administration, for the santonine is then mostly absorbed in the stomach. The only rational preparation is an oily mixture which is slowly adsorbed in the intestines. In any other mode it has a tonic effect with many, but given with ol. ricini is not disagreeable, and very efficient.

High Temperatures.

Mr. Tait reports in the *Lancet* two cases with remarkably high body-temperatures. Both were associated with ovarian disease. In the first case, an ovarian tumor was removed; the temperature reached its maximum, 111°, on the fifth day after the operation, declining to normal on the eighth day. Nothing was found to account for the fever. The second patient was ill with chronic ovaritis, and, after some heavy lifting, the symptoms of pelvic peritonitis supervened. During the following two weeks, her temperature often went up to 110° and 111°. She made a slow recovery and has had frequent relapses, but no repetition of the extremely high temperature.

Pin Sling.

Sampson Gamgee, F.R.S.E., Consulting Surgeon to the Queen's Hospital, Birmingham, says :

A gentleman consulted me the other day for a painful condition of the tip of his left little finger. To secure the benefits of physiological position and immobility, I bent the elbow at an acute angle and raised the hand; then, pinching up the sleeve at the wrist, fixed it to the coat by a strong safety-pin ; with another I attached a fold of the sleeve to the coat just under the elbow. Rest was absolute ; the finger waxed pale and easy; and my patient went to his office duties in comparative comfort.

Even if an ordinary sling be at hand, the process of fixing the forearm at an acute angle is not quite so simple ; and the resulting unsightliness is often unpleasant.

A third pin, fixing the inside of the arm sleeve to the body of the coat, adds greatly to immobility. In this position I have found one pin very useful in steadying the shoulder of a young lady who had it dislocated three times. She had barely recovered from the last accident when she was very anxious to go to a ball. By fixing, with a safety-pin, the inside of the sleeve to the bodice, a trusty, yet invisible, checkmate was provided, allowing freedom of hand, but barring abduction. These are trifles, only noted apologetically, because *pro re nata* they may be useful.—*London Lancet.*

Acute Erysipelas: Remarkable Result From Pilocarpine.

I have here a case to show you which I think will interest you, as it brings out rather a novel treatment of erysipelas. I intended to exhibit this to you this morning as a case of erysipelas, but I find tnat the erysipelas is gone. I, therefore, can only speak of the treatment, which has proved more quickly efficacious than I supposed it would.

This man, B. K., 32 years of age, a fireman, was admitted only day before yesterday. This is the record upon admission : "He says that he was quite well yesterday (November 12,) but did not go to work, as he was celebrating the election. In the evening, according to his statement, he was not drunk, though he had been drinking a little, and became engaged in a very earnest political discussion, when some one, equally earnest, struck him in the right eye, making a bruise on the cheek and a small lacerated wound of the eyebrow," the evidence of which you may see for yourselves. The man at that time was quite well, although under the influence of liquor. "During the night he had much pain in his eye, and in the morning the eyelids were œdematous and the cheek likewise swollen, red and burning." When he applied for admission the inflammation was confined to the right side of the face, but it spread rapidly, and the same afternoon both eyes were closed. It is worth adding to this history that he had slept out all Wednesday night after receiving the injury. He was admitted on Thursday morning, wlth erysipelas of the upper part of the face, which was rapidly spreading over the brow. His pulse was 80; temperature, 102.8°; respiration, 22. The urine was examined, with a negative result. He was ordered tincture of the chloride of iron, twenty drops every three hours, but only received one dose; as the disease was rapidly spreading, and something was needed to make a prompt impression, I used another and more active agent. This was not the first case in which I had used this remedy, but it was the first in which I obtained such rapid relief. He received, hypodermically, one-sixth of a grain of the muriate of pilocarpine. The result was remarkable. Here is the temperature record: the temperature fell from 102° to 99½°. He sweat profusely for an hour and a half, and there was no further development of the erysipelas;

not only did it not spread further but what did exist quickly subsided. No local treatment was employed, not even cold applications; therefore, whatever success was obtained was from the pilocarpine.

I call your attention to this treatment of erysipelas. I said that it had not been my first case; although it was the most striking case I have seen. As long as five years ago I used jaborandi in the treatment of erysipelas until sweating was produced, and, I thought, with the result of checking further development. In one case with high temperature the disease had already made some headway, and did not subside so quickly. Under the use of iron the disease had not been controlled, but the fluid extract of jaborandi, given every two hours, checked it. I have since used the jaborandi in connection with the iron at times, with good results. This is, therefore, not a new treatment with me, as I have used it for some time. Jaborandi, and pilocarpine, its active principle, are, of course, similar in their effects.

I have called your attention to this treatment, not because I believe that it will be followed by the same result in every case, but because it is worthy of a trial. If you get a case of erysipelas in its beginning, use pilocarpine. It has saved this man a long and dangerous illness, and, as he had been drinking, as he says he had, the results might have been serious. In the use of this treatment it should be borne in mind that, in order to be fully effective, profuse sweating must be produced.—*Prof. Da Costa in Col. and Clin. Record.*

Vienna Surgery

I recently saw a case of "Vienna" or "bold" surgery (which generally means an operation done for the benefit of the surgeon instead of the patient.) A woman was brought in, suffering from strangulated femoral hernia of three days' standing. Although taxis failed to reduce it, there were no very urgent symptoms as yet present. The operation (which was done at 11 o'clock at night) was accomplished successfully, and secundum artem, as far as the division of the constricting band. The gut slipped back just as soon as ths constriction was divided, and *before* it was seen whether the strangulated part was gangrenous or not. The consultant immediately decided that an *abdominial section* should be made *to see if the gut was gangrenous or not!* The operator and most of those present objected, but the consultant decided otherwise, and an abdominial section was made, and the gut found all right. The *operation* was a success, but the woman died promptly (in fifty hours.)

A Breach of Professional Etiquette.

The following story is told of the celebrated Oppolzer. Shortly after his arrival in Vienna he was consulted by an invalid, whom he advised, after a somewhat hasty examination, to go to Pistyan, in Hungary, and take the waters. After several months the man, whom the Professor had forgotten, again presented himself, with an aggravation of all his symptoms, and said he had just returned from a course of the Pistyan waters. The Professor examined him, this time rather more carefully, and then, with some wrath, asked him what confounded ass had advised him to go there, as it was the worst thing he could possibly have done. Moral: Always speak well of your neighbor.

Dr. Haig reports in *The Practitioner* the case of a young man thirty years of age, who suffered torments from frequent attacks of hemicrania, which ceased entirely after he adopted a purely vegetable diet, although they had occurred as frequently as three times a week before that time. After living upon an exclusively vegetable diet for a considerable time he was able gradually to return to a bill of fare containing a small quantity of meat.

Perforation of the Appendix Vermiformis; Treatment.

In the earlier cases of perforation of the appendix placed on record, venesection seems to have been generally trusted to as the only means of cure, under the impression that the disease was of a purely inflammatory character. It is scarcely necessary to say that such treatment proved of little benefit, inasmuch as the inflammation was the result of the introduction into the serous sac of a decomposing, or at any rate of an irritating, material which no amount of blood-letting could remove. Its only effect was to lower the vital powers of the patient, and thus to diminish his chance of recovery by adhesion of the injured part to some of the neighboring organs. And other cases were treated by the use of drastic purgatives, on the supposition that the symptoms resulted from intestinal obstruction; but although in most cases the bowels were readily opened the fatal termination of the disease was not thereby obviated. On the contrary, the use of aperients proved to be so detrimental that they were eutirely abandoned in this as in other forms of peritonitis. Of late years opium has been generally employed, but there has been no diminution in the mortality of the disease. I have prescribed it in every case that has come under my notice for some years, either alone or with belladonna; it has always relieved the pain, lessened or subdued the vomiting, given sleep, and proved an immense comfort to the patient, but in no single case has it appeared to avert the fatal termination.

Another plan of treatment has, however, been successfully adopted, viz., that of laying open the abscess formed around the perforation and allowing the pus to escape. The earliest case on record is one performed by Mr. Hancock, which ended in the recovery of the patient. Twenty years afterward Dr. Parker, of New York, operated upon a case successfully, and Dr. Gurdon Buck, of New York, has collected thirteen cases of this operation, of which twelve recovered and only one died. I have twice advised this procedure. In the first case it was not performed until the patient was evidently sinking, but pus was found and evacuated; in the second, which was a very chronic one, the abscess was opened and recovery ensued. I have before mentioned that fluctuation can rarely be distinguished in abscesses of this kind, and out of ten recorded by Dr. Buck it could be felt in only one, proving that there is no necessity to wait until this sign of abscess can be discovered. None of the above cases were operated on before the seventh day, and, with one exception, the operation was not attempted until between the seventh and the fifteenth day; but we have already seen that forty out of fifty-seven cases died during the first week of illness, so that if the rule should be followed, as has been hitherto laid down, of waiting until the pus is completely localized by adhesions, the operation will be restricted to a very small number of those who are attacked with this formidable malady. Theoretically it would seem to be much better if we could cut down upon the appendix as soon as the diagnosis was tolerably certain, tie it above the seat of the perforation and remove from its neighborhood any concretion or decomposing material that might be the cause of irritation. The only objection that I can see to an early operation is that adhesions to the neighboring organs might be prevented; but when we reflect how very rarely the fortunate termination occurs, and how certainly death follows if it does not take place, we may, I think, dismiss the objection from our consideration. But even when adhesion does result from perforation the fatal issue is in most cases only postponed, for, as we have before shown, the adhesions are often torn asunder by some undue exertion of the abdominal muscles and fatal peritonitis ensues.

Two methods of operation have been pursued: In one an incision has been made directly into the suppurating part and the pus at once evacuated; in the other the incision has only been carried down to the fascia, and either the pus has been allowed afterward to escape spontaneously or an aspirator has been passed into the most depending portion of the swelling and the contents thus evacuated. It is evident, however, that if an operation were performed at an early period the incision must be carried down directly to the injured part, for we can not suppose that pus would be formed and localized until many days after the perforation had taken place.

The choice of the method of operation must of course be left to the discretion of the surgeon, and will probably require to be varied according to the circumstances of each case. Of one thing we may be quite certain, that no drugs are likely to be of much avail; for your common sense will tell you that when you have an irritating material suddenly introduced into a large serous sac the only chance of giving relief is to remove it, and thus put a stop to the original cause of the mischief. The office of the physician, therefore, will most likely become restricted to diagnosis, and it is only by carefully watching the first symptoms and the physical signs of the disease and by comparing them with those of other disorders that may simulate it that we shall be able to arrive at such a correct judgment as may justify the employment of surgical measures at an early period of the case.—*London Lancet.*

Mouth Breathing.

In a recent number (November 22, 1884) of the *New York Med. Record*, there is a paper by Dr. George W. Major, which he read before the Canada Medical Association, Montreal, August 26, 1884, in which he calls attention to the causes, consequences, prevention and cure of the habit of breathing through the mouth.

In some cases, he observes, this is not simply a habit but a necessity caused by some permanent mechanical obstruction to free respiration in the natural manner through the nostrils; in other cases the habit is formed in early life as the result of some temporary swelling of the nasal mucous membrane or otherwise.

Dr. Major remarks that while the function of the nose to which the thought of most of us would turn as especially belonging to it is smelling, that of respiration is far more important as it purifies, moistens and modifies the temperature of the air before it reaches the larynx and the lungs.

He asserts that the habit of breathing through the mouth is productive of actual physical deformities, viz., deformed chest with prominent sternum, sunken sides, retraction of the line of attachment of diaphragm and rounded shoulders, shortening of the upper lip and undue prominence of the upper incisors and irregular development of symphisis of the upper jaw; flattening and thinning of the *alæ nasi* and wasting of the muscles of the nose and its neighborhood. He claims that these latter characteristics are more pronounced on the side where there is the greater obstruction. He also asserts that in aggravated cases there is an expression of stupidity with loss of memory. He admits that the latter may be the result of internasal pressure rather than of mouth breathing directly. We certainly think it questionable whether there is any casual relation between the mouth breathing and the other deformities mentioned unless it be those of the mouth. The deformities of the chest and nose are evidently rather due to the obstruction of respiration which itself causes the mouth breathing.

He refers to this habit also the occurrence of foul breath and decayed teeth, and thinks that involuntary micturition during the night is also caused by it.

The principal causes of mouth

breathing are deviations of the nasal septum, outgrowths from the bones or cartilages of the nose, or of its mucous membranes, or from that of the pharynx or tonsils.

As this habit is usually contracted in early childhood, it is important that parents and nurses should be instructed as to the effect of it so that the attention of the physician may be called at once and if it be due to any permanent obstruction of respiration may institute proper measures for its removal.

He regards deviation of the nasal septum as probably the most frequent cause of obstructed breathing. He insists upon the necessity of surgical interference, giving preference to the method of Dr. Ingalls, of Chicago, in which the mucous membrane of the deviated side and cartilage are carefully divided in a triangular shape with the apex upward, the cartilage dissected from the mucous membrane of the opposite side and removed, the septum being brought into line with pliers and the divided mucous membrane held by sutures and a pad of soft antiseptic material. The resiliency of the cartilage is such as to necessitate the removal of a portion equal to the redundancy in order to acquire a straight line.

Of the various punches used he recommends only that of Sajous, of Philadelphia, in which a movable blade can be fixed at any angle and the septum be divided through and straightened by allowing overlapping, and be held in place by plugs until healed. Our own preference would be for the stellate punch devised by Dr. A. J. Steele, of St. Louis.

For the various other forms of obstruction by hypertrophy of mucous membrane or tumors of one kind or other he advises removal by the galvano-cautery. Where bony growths have formed he finds the surgical engine and burr the most satisfactory means of removal.

The tonsillotome is the best instrument for the removal of the tonsils.

Is it necessary to permit Women to Suffer during the First Stage of Labor?

In a communication in the November, 1884, issue of the *Obstetric Gazette*, Dr. Wm. B. Atkinson writes as follows: I regard it as being highly reprehensible to allow any woman to suffer, especially, as it is so often the case, when from some vice in the system, she will commence hours, even days, prior to delivery, with pains which are utterly useless and greatly exhausting. In the early years of my practice I employed morphia, but now, since 1869, I invariably give chloral, and I have never failed to see the happiest results. When called to a case and I find the woman suffering with pain at intervals, little or no dilatation of the os uteri, I immediately administered a positive dose of chloral, from ten to twenty grains, with orders to repeat in an hour or two if required. I tell my patient that this will not delay the labor, but merely act as a partial anesthetic to relieve her sufferings. It is always best to so instruct the patient and her attendants, as otherwise I have returned to find them endeavoring to keep the patient awake in order that she may go on with her labor. Make a full explanation of the true condition of affairs and of the expected results to be obtained from the medicine. When these are false pains they are speedily dissipated, the woman has a refreshing sleep, and may go on for a number of days in much comfort until true labor sets in. Or she awakes refreshed, invigorated, and, in many instances, on my return, I have found the os uteri fully dilated and the labor rapidly progressing to a favorable termination. Where the physician believes the labor to have really commenced, after giving such treatment, he should always return after the expiration of a few hours, as otherwise he may be regarded as neglectful should the labor, under the influence of the chloral, be terminated in his absence.—*College and Clinical Record.*

Belladonna Injection for Gonorrhœa.

Some thirteen years ago an officer on board one of the vessels of the Indus Steam Flotilla consulted me for a bad gonorrhœa with intense pain on micturition, and intolerable chordee at night. The case was urgent and I ordered an injection composed of seven ounces of water, an ounce of mucilage acacia, twenty grains extract of belladonna, and twenty grains sulphate zinc, a teaspoonful to be injected immediately before and after micturating, and a similar amount the last thing at night, great care to be used in passing the injection fully down as far as the pain was most intense. An ointment of spermaceti and mercurial ointment, four drachms each, and ten grains extract belladonna, ten grains powdered opium, a paste to be smeared along the perineum and around the crura penis at night. Patient left next morning, having had no chordee that night, and the pain of micturition disappeared by using the injection. Within a week there was complete cure. From that time I have had numerous gonorrhœal cases of every type and stage, and I have used the injection in every instance, and without exception, with unfailing success.

Not long since a shop assistant presented himself with a bad gonorrhœa, high fever, inflamed testicle, and chordee at night. With the application of the belladonna and opium ointment the chordee did not appear, and in four days after using the injection the running ceased, but after the first application the pain and running were much lessened. A suspensory bandage was worn, and with the daily use of the mercurial and belladonna and opium ointment the patient was well in three weeks. Patients have always stated that it is the injection and not the ointment that stopped the chordee carminatively. I have tried the anodyne treatment in various classes of people, from the dissipated nymphs of the Eastern bazaars to the well-fed *roue* in the West; in the acute and in the chronic and gleety stages; in first attacks and in those making one of a series; and in cases complicated with inflamed testicles and chordee; and I have no hesitation in saying that, I have not witnessed anything to contraindicate it, nor to mitigate its success.—John Roche, M. D., in *Medical Press.*

Strict Antiseptic Surgery.

An interesting account as to how our German colleagues follow out the antiseptic treatment in operations and the dressing of wounds is found in the Medical Press and Circular: Before every operation the stream spray of corrosive sublimate is worked for some time to disinfect the atmosphere of the room. The floor of the operating room is flooded with water, so that the assistants are compelled to wear rubber boots. During the operation a continuous stream of a solution of sublimate, 1 - 1000, is directed on the wound. In the dressing of the wound after the edges have been united, a layer of glass wool, saturated with a ten per cent. solution of sublimate is placed over it, over this small pillows of peat dipped in sublimate solution are placed and over all this sublimated gauze. The dressings are never removed until the wound heals or some discharge shows through the dressings. The results gained by Schede, of Hamburg, in this manner are astonishing. Out of an immense number of operations performed in 1883, among which were nine cases of resection of the hip-joint, there were only two or three cases that showed any sign whatever of suppuration.

We have received from Messrs. P. Lorillard & Co., the well-known manufacturers of chewing tobacco, a large lithographic plate, giving accurate portraits of the representative professional base ball players of the country. All lovers of the national game should get the picture and frame it.

The Medical Chronicle.

A Monthly Journal for the Practitioner.

GEORGE H. ROHÉ, M. D., Editor.

☞It is requested that all literary and business communications, books for review, exchanges, etc., be addressed to, and all checks, drafts and post-office orders drawn to the order of

DR. GEORGE H. ROHÉ,
Cor. Greene & Mulberry Sts., - Balto., Md.

BALTIMORE, JANUARY, 1885.

EDITORIAL.

One Thousand Cases of Abdominal Section.

In the *Medical Record* for January 5th, Mr. Lawson Tait publishes the results of 1,000 operations performed by him in which the peritoneal cavity was opened. The total number of deaths was 93, a death-rate of 9.3 per cent. Among the operations were 94 exploratory incisions, with two deaths, 405 removals of ovarian and parovarian cystomata, with thirty-three deaths, a fraction over 8 per cent. These operations are, however, divided into those in which the clamp was employed, and those where the ligature was used. Sixty-two cases treated with the clamp gave a mortality of 25.7 per cent. while of 343 in which the ligature was employed, only 4 58 per cent. died. Of the latter, 30 were done antiseptically, with a mortality of 6.6 per cent., and 313 non-antiseptically, with a death-rate of 4.8 per cent. As is well known, Mr. Tait has entirely abandoned the details of Listerism in operating, but we are led to infer from his report that the good results he has obtained are not attributed by him to his abandonment of Listerism, but to greater skill and care in operating.

Removal of the uterine appendages (Tait's operation) was done 307 times, with 17 deaths, a mortality of 5.54 per cent. This operation was done 99 times for the relief of uterine myoma, with a mortality of 7 per cent. Removal of the uterus, on the other hand, in 54 cases, was attended by a mortality of 35.7 per cent. As the much less grave operation secures the desired relief in a large majority of the cases, it would seem to be an amply justified procedure.

Mr. Tait opened the abdominal cavity for the purpose of draining pelvic abscesses, 30 times, for cholecystotomy, 13 times, nephrotomy, 9 times, nephrectomy, 3 times, and hepatotomy, 12 times, without a single death.

The anesthetic preferred by Mr. Tait is "a mixture of two parts of ether, and one of chloroform, given by means of Clover's apparatus." He does not think this is safer than any other anesthetic, but it acts rapidly, is not unpleasant to the patient, and leaves less sickness behind than (in his experience) either chloroform, ether or bichloride of methylene. This record of Mr. Tait's work establishes several points, namely, that ovariotomy can be successfully performed without the use of the spray and other details of the Listerian ceremonial; that the removal of the uterine appendages for myoma of the uterus and inflammatory disease of the tubes and ovaries is a justifiable operation, and that opening and draining of pelvic abscesses, opening the gall bladder, renal or hepatic cysts, or exploratory incisions of the abdomen are much less dangerous procedures than is generally supposed.

We trust Mr. Tait will publish an extended analysis of his operations at an early date.

Some Results of the Enforcement of Laws Regulating the Practice of Medicine.

The State Board of Health of Illinois has just published a revised edition of the official register of physicians and midwives authorised to practice in that state. There are at

present 5,885 persons engaged in the practice of medicine in Illinois. Of these, 4,780 are graduates of medical institutions, while 1,105 are non-graduates. In the last four years there has been an absolute reduction of nearly 100 practitioners, while the percentage of graduates to non-graduates has increased about 10 per cent.

When the medical practice act went into effect July, 1877, there were 7,400 persons practicing medicine in the state, over half of whom were non-graduates. The absolute reduction in the seven years during which the law has been in existance is 1,515, notwithstanding the increase of population.

The Illinois State Board has demonstrated the efficiency of its organisation, by producing these desirable results. It has further shown that it means what it says in its "Schedule of Minimum Requirements," by requiring, since the close of the session of 1883, an examination of the graduates of those colleges which have neglected to give instruction in all the branches mentioned in the Schedule. It was stated at a recent meeting of a medical society in Philadelphia, that graduates of the medical schools of that city could not obtain a license to practice in Illinois, until they had passed an examination in hygiene before the State Board. Dr. Rauch and his associates in the Board have been enforcing their regulations so thoroughly that some of the organs of the Chicago colleges even have begun to squeal.

In our youthful neighbor, West Virginia, similar results have followed the enforcement of the law regulating medical practice. In that State, all non-graduate practitioners not exempt by provisions of the law, have been compelled either to submit to an examination before the State Board of Health, or leave the State. Doubtless Maryland has proved a haven of refuge for many of these quacks.

At the last session of our Legislature a faint-hearted effort was made to obtain a law somewhat similar to those in force in Illinois and West Virginia, regulating the practice of medicine. For reasons not necessary to give here, the attempt failed. A lack of unity in the profession had doubtless much to do with the failure. If the Medical and Chirurgical Faculty would take hold of the matter *in earnest*, something could be accomplished.

Will the Faculty do its duty, or will it allow the next session of the Legislature to pass, as it did the last, letting, not well enough, but bad enough, alone?

A new Legislature meets next winter. If anything is to be accomplished it is time to begin the agitation now. Will the progressive physicians of Maryland unite to place their State in line with Illinois, West Virginia, Minnesota, Virginia, Missouri, Wisconsin, Nebraska and other States, or will they allow her to remain as at present, a refuge for quacks driven out from the commonwealths on her borders?

Quack Enterprise.

It has long been a custom for manufacturers of quack medicines to secure the endorsement of clergymen for their preparations. This has been such a matter of course that it has long ago ceased to attract attention unless an especially flagrant example occurs. Within the past year, however, our local quack-medicine men have been striking for higher game. Just at present certain City and State officials and a large number of members of the medical profession are laid under contribution and made to "cheerfully endorse" bitters, blood purifiers and cough cures. We regret that we lack space to give the text of some of these certificates. They would prove mighty interesting reading.

It may be that these certificates are forgeries; if so, it is the duty of those whose names and reputations have been thus tampered with, to publicly expose the shameless fraud. If, on the other hand, the certificates are

genuine, we would call the attention of those members of the profession who are involved, to an article in the Code of Ethics, which declares that it is "reprehensible for physicians to give certificates attesting the efficacy of patent medicines, or in any way to promote the use of them."

CURRENT LITERATURE.

Third annual Report of the State Board of Health of New Hampshire. Concord, 1884, Dr. Irving A. Watson, secretay.

This report contains a good deal of practical information on drinking water, sewerage, the prevalence of typhoid fever and diphtheria, and of other matters relating to the preservation of the public health.

PAMPHLETS.

A case of Caries of the Petrous portion of the Temporal Bone, with Facial Paralysis and fatal hemorrhage from the Carotid. By S. Moos and H. Steinbrugge. Reprinted from Arch. of Otology, 1884.——A case of Fracture of the External Auditory Canal by Contre-coup, with rupture of the Drumhead. By Dr. Cornelius Williams, of St. Paul, Minnesota. Reprinted from Arch. of Otology, 1884.——A case of Multiple Xanthoma, exhibiting the Plane, Tubercular and Tuberose Varieties of the Disease; with Remarks. By W. A. Hardaway, M. D., Prof. of Dermatology in Mo. Med. College. Reprinted from St. Louis Courier of Medicine, October, 1884.——Explanation of the Pathology and Therapeutics of the Diseases of the Nerve Centres, especially Epilepsy. By J. McF. Gaston, M. D., Atlanta. Reprinted from Trans. Med. Assoc'n of Georgia, 1884.——Oleate of Copper: Its Employment in Five Hundred Cases of Parasitic Disease of the Skin. By F. Le Sieur Weir, M. D. Reprinted from N. Y. Med. Jour., Aug. 30, 1884.——On the Rise and Progress of Epidemics. By Geo. Homan, M. D., St. Louis. Reprinted from the St. Louis Courier of Medicine, September, 1884.——On the Pathology of Paget's Disease of the Nipple. By Louis A. Duhring, M. D. and Henry Wile, M. D., Philadelphia. Reprinted from Journ. Med. Sciences, July, 1884.——Dermatitis Herpetiformis. By L. A. Duhring, M. D. Reprinted from Journ. Amr. Med. Assoc'n, Aug. 30, 1884.——Notes on a case of Dermatitis Herpetiformis, extending over Eleven Years. By L. A. Duhring, M. D. Reprinted from Phila. Med. Times, July 12, 1884.——Case of Dermatitis Herpetiformis aggravated by Pregnancy and Irregular Menstruation. By L. A. Duhring, M. D. Reprinted from Medical News, July 19, 1884.——Jequirity: Its Uses in Diseases of the Skin. By Jno. V. Shoemaker, A. M., M. D., Philadelphia. Reprinted from Transactions Med. Society of State of Pennsylvania, 1884.——On Certain Practical Points in the Pathology, Clinical History and Treatment of Cancer. By Geo. H. Rohé, M. D., Baltimore. Reprinted from Transactions Med. and Chir. Faculty of Md., 1884.——Report on the Prevention of Epidemic Cholera in America. By the Committee of Conference of State Boards of Health in St. Louis, October 14-15, 1884.——Gulf-Coast Quarantine. Report to the Tennessee State Board of Health. By G. B. Thornton, M. D., Memphis, Tenn., 1884.——Mumps as a cause of sudden deafness. By Leartus Connor, A. M., M. D., Detroit, Mich. Reprinted from American Journ. Med. Sciences, October, 1884.——Notes on the Treatment of Trachoma by Jequirity. By Leartus Connor, A. M., M. D. Reprinted from Detroit Lancet, Sept., 1884.——One Aspect of the Subject of Medical Examination, as set forth in the work of the North Carolina Board of Medical Examiners.——Practical Recommendations for the Exclusion and Prevention of Asiatic Cholera in

North America. By Jno. H. Rauch, M. D., Secretary Illinois State Board of Health, Springfield, 1884.——National Conference of State Boards of Health, held at St. Louis, Oct 13-15, 1884.——A Clinical study of Lupus Erythematosis as it affects the Hands. By J. Nevins Hyde, M. D., Chicago. Reprinted from Journ. Cut. and Ven. Diseases.—— On the Etiology of Pulmonary Phthisis. By B. F. Westbrook, M. D., Brooklyn. Reprinted from N. Y. Medical Journal, July, 26, 1884.——Climate and Health in Michigan. By Henry B. Baker, M. D., Lansing, Mich. Reprinted from Descriptive America, August, 1884.—— Opinion in the Case of State W. Virginia *vs.* Frank M. Dent, Wheeling, 1884.——Diphtheria: its Sanitary, Preventive and Local Treatment. By Jackson Piper, M. D., Towson, Md. ——Unilocular Ovarian Cyst, weighing ninety-five pounds, successfully removed. By Geo. E. Ranney, M. D., Lansing, Mich., Reprint from Journ. Amr. Med. Assoc'n, Nov. 29, 1884——House Drainage in New Haven. By Alton W. Leighton, Ph. B., M. D., Reprint from N. E. Med. Monthly, Nov., 1884.——The Plaster of Paris Dressing in the Treatment of Fractures. By W. O'Daniel, M. D., Reprint from Trans. Med. Assoc'n of Georgia.——Permanganate of Potassium; Its Action and Uses. By Roberts Bartholow, M. D., L. L. D., Reprint from Medical News, Nov. 22, 1884.——The Aspirator in Pleural Effusion. By H. I. Bowditch, A. M., M. D., Reprint from Boston Med. and Surg. Journal, Dec. 11, 1884.—— Annual Report of Board of Managers of the Maryland Hospital for the Insane, for 1884.——Thirty Second Annual Announcement of the Medical Department, University of Vermont. ——Muriate of Cocaine in Ophthalmic Surgery. By C. J. Lundy, A. M., M. D., Reprint from Physician and Surgeon, for November, 1884.—— The Dry Treatment of Chronic Suppurative Inflammation of the Middle Ear. By C. J. Lundy, A. M., M. D.

FLOTSAM.

DR. S. M. BEMISS, one of the most prominent physicians in the south, died suddenly in New Orleans during last November.

AT the annual election of officers of the Medical and Surgical Society of Baltimore, Dr. A. F. Erich was elected president for the current year.

THE carriage of the late Dr. Geo. S. Kinnemon is for sale. It is in good order and has been very little used. It can be seen by applying at 73 E. Pratt Street, Baltimore.

THE Baltimore Medical Association celebrated its nineteenth anniversary by a fine supper at the Eutaw House, on January 12. Dr. Joseph T. Smith was elected president for the current year.

TID-BITS is the name of an entertaining and instructive weekly magazine published by the J. W. Lovell Co., of New York. The subscription price is only $1.00 per year. It will be furnished with the CHRONICLE for $1.50.

WE are glad to be able to announce the revival of the *Annals of Surgery*. The new series will be much more fully representative of the progress of surgery, and will have an editor both in this country (Dr. L. S. Pilcher, of Brooklyn,) and in England (C. B. Keetley, London). The publishers are J. H. Chambers & Co., of St. Louis, and the subscription price is $5.00 per annum.

THE micro-organism of syphilis has again been discovered. This time it is a bacillus and its discoverer is Dr. Sigmund Lustgarten, of Vienna. To avoid disappointment we would caution our readers to await more definite advices before accepting the discovery as a real one. Other investigators, competent and otherwise, have been fooled by micrococci and bacteria in syphilitic blood, and the same fate may await this latest claimant.

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MEDICAL CHRONICLE.

BALTIMORE, FEBRUARY, 1885.

Original Articles.

ARTICLE I.

DISINFECTANTS.

PRELIMINARY REPORTS OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.*

[The prevention of disease is more important than its cure. The work now being done by the Committee on Disinfectants of the American Public Health Association, promises to be the most important contribution to our knowledge of what are disinfectants, and the conditions of disinfection ever made in this country. The threatened epidemic of cholera makes this knowledge especially timely and valuable to every practitioner. We have concluded therefore to publish the preliminary reports in full for the information of our readers.

ED. CHRONICLE.]

INTRODUCTION.

At the recent meeting of the American Public Health Association, held in St. Louis, Mo., October 14-17, 1884, Dr. James F. Hibberd, of Indiana, introduced resolutions calling for the appointment of a committee to investigate the subjects of "disinfectants, germicides, and antiseptics," and formulate the results of their research, so as to make the existing knowledge on these topics available for professional and popular use. This is the purport of the resolutions which were adopted by the

*From the *Medical News*, January 24, 1885.

Association. A Committee was accordingly appointed, conisting of Major George M. Sternberg, Surgeon U. S. Army, Baltimore; Dr. J. H. Raymond, Professor of Physiology and Sanitary Science in Long Island College Hospital, and Health Commissioner of the city of Brooklyn; Dr. Victor C. Vaughan, Professor of Chemistry in the University of Michigan; Dr. W. H. Watkins, Medical Director of the Auxiliary Sanitary Association of New Orleans; Major Charles Smart, Surgeon U. S. Army, Washington; Dr. A. R. Leeds, Professor of Chemistry in Stevens' Institute of Technology, Hoboken; and Dr. George H. Rohé, Professor of Hygiene in the College of Physicians and Surgeons, Baltimore.

At a meeting of the Executive Committee of the American Public Health Association, held in Washington on December 11, 1884, the Committee on Disinfectants was authorized to publish and make available to sanitarians and the public the results of its labors at as early a date as practicable, in view of the possible invasion of this country by cholera during the coming summer. A preliminary statement of the work of the Committee has already been made to the Conference of State Boards of Health, in session in Washington, December 11 and 12, 1884.

In order to be enabled to pursue a thorough scientific research, the Committee, after consultation, decided to appeal to city and State boards of health, and to sanitary associations for financial aid. Responses to this appeal have been encouraging, and the Committee flatters itself that the work now in progress will yield results of very great practical value.

A complete investigation of both disinfectants and antiseptics being impracticable in the time and with the resources at command, the Committee decided upon so far departing from the letter of the resolutions of Dr. Hibberd, as to limit its inquiry altogether to disinfectants, and to omit all investigations into the action of antiseptics. The Committee would define a disinfectant as an agent capable of destroying the infective power of infec-

tious material. In its experimental investigations, the Committee has adopted the biological test upon known disease germs or allied organisms. The details of the methods pursued will be given by Dr. Sternberg in a subsequent paper in this series. Provisionally, it may be stated that in the experiments material containing zymogenic or pathogenic organisms is exposed for a definite time to the action of a measured quantity of the supposed disinfecting agent. If the vitality of the test-organism is destroyed, if it is rendered incapable of subsequent reproduction or development when placed under favorable conditions, the test is regarded as satisfactory. If, however, the organism should grow, subsequent to its exposure to the agent to be tested, disinfection has not followed.

At a meeting held in Baltimore on November 20th, the Committee was divided into two sub-committees, one consisting of Drs. Sternberg, Smart and Rohé, to examine the literature of disinfectants, and abstract and tabulate the results, and to investigate in an exact manner in the laboratory the relative germicidal value of the various substances used as disinfectants. The latter part of the inquiry is exclusively under the direction of Dr. Sternberg, the Chairman of the Committee, who has been granted exceptional facilities for carrying on this work in the biological laboratory of the Johns Hopkins University in Baltimore.

The second sub-committee consists of Professors Raymond, Vaughan and Leeds, and Dr. Watkins, and will have especially to investigate the practical application of such disinfectants as are found efficient, upon a large scale, their cost, methods of use, chemical relations, effects upon furniture or fabrics, or their possibly poisonous effects upon human beings or animals. Preliminary reports from members of this sub-committee will also appear in this series of papers.

In this way the Committee hopes to fulfil the expectations of the American Public Health Association and others interested, and to render available, before the

arrival of the next epidemic season, all knowledge of practical value upon the important subjects of disinfectants and disinfection.

The Committee considered it unnecessary to make any original experiments at presents upon the disinfecting powers of the haloid elements—chlorine, bromine and iodine. In accordance with a suggestion of the Chairman, the writer presents herewith the results of an examination of the recent literature upon the disinfectant action of these substances.

I.

CHLORINE, BROMINE AND IODINE.

By GEORGE H. ROHÉ, M.D.,
Professor of Hygiene in the College of Physicians and Surgeons, Baltimore.

Chlorine.—The most thorough and exact research into the disinfectant powers of chlorine on record, is that made by Fischer and Proskauer, and published in the second volume of *Mittheilungen aus dem Kaiserlichen Gesundheitsamte.* The material tested consisted of the spores of bacillus anthracis, spores of the various forms of bacilli found in ordinary garden soil, micrococcus tetragenius, micrococcus prodigiosus, bacillus of septicæmia of mice, bacillus of septicæmia of rabbits, aspergillus nigrescens and aspergillus ruber, micrococcus of erysipelas, sputum of tuberculosis, bacillus anthracis, bacterium of fowl-cholera, and various other non-pathogenic microorganisms.

The observations were made both in dry air and in air artificially moistened, and the objects to be disinfected were sometimes exposed in a dry, sometimes in a moist condition. The concentration of the gas varied from 1 part in 25,000 to 1 part in 2¼. The time of exposure in the different experiments varied from one to twenty-four hours.

Anthrax spores when thoroughly desiccated and exposed to the action of a dry chlorine atmosphere containing 44.7 parts of chlorine in 100, resisted the disinfectant action of the agent completely for one hour. After three

hours' exposure, germination was still free, but somewhat retarded. After twenty-four hours exposure, disinfection was complete, the vitality of the organism being entirely destroyed.

When the air in the experimental chamber, and the spores were moistened, one hour's exposure to an atmosphere containing four per cent. of chlorine was sufficient to produce complete disinfection. If the exposure was continued for three hours, one per cent. of chlorine was an efficient disinfectant; and if the spores were exposed for twenty-four hours, the effective proportion of chlorine could be still further reduced, if the air and objects to be disinfected were first rendered moist.

Bacillus anthracis itself was killed in moist air, if chlorine was present, in the proportion of 1 part in 2500 after twenty-four hours' exposure. Even with such a minute proportion of chlorine as 1 part in 25,000, the development of the organism was scanty and retarded.

Spores of the various forms of bacilli found in ordinary garden soil proved a little more resistant to the action of the chlorine. When the air in the experimental chamber was very moist, however, the presence of one per cent. of chlorine, and upwards, rendered the spores incapable of development after three hours' exposure. When the chlorine strength was four per cent., one hour's exposure was sufficient to destroy the germinative power of these spores.

Micrococcus tetragenius was killed in moist air by the presence of so small a proportion of chlorine as 1 in 25,000, if the exposure was prolonged to twenty-four hours. Exposure for less than three hours was not sufficient to destroy the life of the organism in all cases.

Micrococcus prodigiosus, and several other varieties of pigment-forming micrococci, showed themselves generally more resistant to the disinfectant than micrococcus tetragenius. In other respects, they behaved similarly, exposure for upwards of three hours being sufficient to destroy them in the presence of over four per cent. of chlorine.

Aspergillus nigrescens and aspergillus ruber were ren-

dered incapable of further growth by exposure for one hour to moist air containing 1 part of chlorine in 25,000.

Micrococcus of erysipelas was killed by three hours' exposure to moist air containing 1 part of chlorine in 2500, or twenty-four hours' exposure to air containing 1 in 25,000.

Bacillus of septicæmia of mice was killed by exposure to an atmosphere containing from 3 to 40 parts of chlorine per thousand. The presence of 5 parts per thousand was effective after one hour's exposure in a moist atmosphere.

Bacillus of septicæmia of rabbits was killed by an exposure of twenty-four hours to 5 parts per thousand; and after one hour's exposure to 40 parts per thousand, but retained its infective properties after one hour's exposure to 5 parts per thousand.

Tuberculous sputum was disinfected after one hour's exposure to an atmosphere containing 5 parts of chlorine per thousand.

Bacterium of fowl-cholera was destroyed after exposure for twenty-four hours to a moist atmosphere containing 1 part of chlorine in 25,000.

Dr. G. M. Sternberg (*Report National Board of Health*, 1880, p. 320) tested the effect of chlorine upon dried vaccine lymph and the micro-organisms of putrid urine. Six hours' exposure of vaccine lymph dried upon ivory points to an atmosphere containing 1 part of chlorine in 200, was sufficient to destroy the infective property of the lymph, as tested by subsequent inoculation. In one experiment five points were exposed to an atmosphere containing 1 per cent. of chlorine; of these, four were disinfected, while the fifth furnished a satisfactory vaccine vesicle. The failure in this case is explained by Dr. Sternberg by the assumption of an unusually thick coating of dried lymph. In these experiments, control-inoculations with non-disinfected virus from the same packages were made in all cases.

The bacteria of putrid urine were destroyed after six hours' exposure to an atmosphere containing 1 part of chlorine in 400.

Braidwood and Vacher ("Report of Life-history of Contagium," *British Medical Journal*, 1876, vol. ii,) mixed liquid vaccine virus with equal parts of liquor chlori, (B. P.,) and completely destroyed the infectivity of the vaccine. The time of exposure is not stated.

Dr. E. B. Baxter (*Report of Medical Officer Privy Council*, 1875,) tested the effect of chlorine on liquid and dry vaccine, and on the "virus of infective inflammation." The infectivity of the later was destroyed by the presence of 8 to 15 parts of chlorine in 10,000. The time of exposure to the action of the disinfectant is not stated. The experiments of Dr. Baxter on vaccine lymph are not detailed with sufficient exactness to allow trustworthy conclusions to be drawn. He states, however, that "unless the chlorine was present in sufficient quantity to render the lymph acid, it had no effect.'

Fischer and Paoskauer, in addition to testing the influence of chlorine on micro-life, also exposed a number of fabrics, colored leather, and wearing apparel to the action of this agent. All the colored articles were either bleached or much altered in color. They conclude their elaborate memoir with the following observation :

Disinfection with Chlorine is attended by great inconvenience, on account of the rapid evolution of the gas from the chlorinated lime and hydrochloric acid when mixed, and the very irritant action of the gas upon the mucous membrane of the larynx and of the eyes. Clothing is also liable to be discolored by the action of this disinfectant.

Bromine.—Fischer and Proskauer (*Ibid*) also studied the effect of the vapor of bromine upon spores of bacillus anthracis, spores of garden soil bacilli, tuberculous sputum, bacillus anthracis, micrococcus prodigiosus, micrococcus tetragenius, micrococcus of erysipelas, aspergillus nigrescens, aspergillus ruber, and several other non-pathogenic organisms.

After an exposure of three hours in a dry atmosphere containing 3 parts of bromine vapor in 100, the anthrax bacillus, tuberculous sputum, and both aspergillus spe-

cies were entirely disinfected. The spore-bearing organisms and the non-pathogenic micrococci retained their power of development, although generally in a diminished degree. After moistening the air in the experimental chamber to the greatest attainable degree, three hours' exposure to an atmosphere containing 1 part of bromine in 500 acted as a thorough disinfectant; if the exposure was prolonged to twenty-four hours, 1 part in 3500 was efficient. When the proportion of bromine was reduced to 1 part in 16,000, exposure for twenty-four hours failed to disinfect spore-bearing organisms.

Upon the whole, bromine did not prove as prompt a disinfectant as chlorine, besides being very difficult and dangerous to handle.

Iodine.—The disinfecting power of iodine has been determined by Dr. G. M. Sternberg (*American Journal of the Medical Sciences*, April, 1883.) He experimented upon the micrococci of pus and of septicæmia, bacterium termo, and the organisms found in broken-down beef-tea. An exposure of two hours to the disinfectant in solution, in the proportion of 1 in 500, was effective in destroying the vitality of all of these organisms.

Salmon (*Report of United States Department of Agriculture*, 1883,) experimented on the micrococcus of fowl-cholera, and found iodine an efficient disinfectant in the proportion of 1 part in 1000.

Summing up briefly our knowledge upon this subject, the following conclusions seem to be justified:

1. Chlorine is an efficient disinfectant when present in the proportion of 1 part in 100; provided the air and the objects to be disinfected are in a moist state, and the exposure continues for upward of one hour.

2. Chlorine, when used in sufficient concentration to act as a trustworthy disinfectant, injures colored fabrics and wearing apparel.

3. Bromine is an efficient disinfectant in the proportion of 1 part in 500; provided the air be in a moist state, and the exposure continues for upward of three hours.

4. Iodine, in solution, is an efficient disinfectant in the

proportion of 1 part in 500; the exposure continuing for two hours.

5. The use of chlorine, and in a greater degree of bromine, requires considerable experience in management; when carelessly handled they may cause inconvenient or even dangerous symptoms in persons using them; for these reasons they are not suitable as disinfectants for popular use.

ARTICLE II.

CLINICAL NOTES FROM BAY VIEW ASYLUM.

By W. PAGE McINTOSH, M. D., Resident Physician.

Case I.—*An Overdose of Aconite.* Henry B., colored male, aet. 30 years. This patient was under treatment for mental trouble. Finding, however, that he was also suffering from gluteal abscess, with fistula in ano, he was removed to col. surgical ward for treatment. In the bed next him was a patient suffering acute arthritis. This patient was using a topical application, equal parts tr. aconite, tr. iodine and glycerine. On one occasion the bottle containing the above ingredients was left where the insane patient could get it. The prescription had been recently compounded and contained about one oz. each of above.

Thinking that he had found a bottle of syrup, the insane man drank the whole at a draught. I saw him ten minutes later; at this time he complained of great pain in mouth, throat and stomach, had vomited a slight quantity, and was still retching, though nothing followed his attempts. The pulse was slow and weak, pupils dilated, breathing shallow, skin excreting freely, patient unable to stand. In a few minutes he was given large quantities of starch water; this was immediately ejected, considerably discolored; this was continued until the vomited matter was of normal color, and then stimulants were administered freely. Patient rallied comparatively rapidly, the only trouble he complained of next day being muscular weakness, with sore mouth and throat. I am

pleased to be able to state that his self-administered remedy had a most beneficial influence (?) on his mental trouble; from being noisy and meddlesome he became quiet and unobtrusive, and was discharged as cured a few months later. He remembered quite well taking the poison, and said he did not want any more.

Case II.—*Untoward Effects of Nerve Stretching.* Sallie C., white female, aet. 58. When admitted patient was suffering from sarcomatous tumor in axilla.

In operating for the removal of this tumor the surgeon found it necessary to use considerable force in order to detach it from the surrounding tissues. Inadvertently a portion of the brachial plexus was included in the traction. Being anxious to observe the effects of nerve stretching I watched the case closely. The temperature was sub-normal on the affected side. Complained of very little pain, but the power to extend hand was entirely lost, patient suffering from characteristic wrist drop. This condition continues notwithstanding the use of electricity. No sign of return of sarcoma and patient is quite happy.

Case III.—*Typhoid following Typhus Fever within four weeks.* During the months of March and April, of 1884, we had quite a number of cases of exanthematic typhus, twenty-three, I believe, in all; a majority of the cases treated died, thus verifying the diagnosis.

Theresa S., white female, aet. 30 years, was attacked and removed to the pest barracks among the other cases. She went through the ordinary course of the disease and recovered. Two weeks later she was removed to the main building. Two weeks later, or four weeks from the time of recovery from exanthematous typhus, she was attacked with abdominal typhus (typhoid) and died in ten days. The post mortem showed the anatomical lesions peculiar to abdominal typhus. There were no other cases of typhoid in the house at this time. I am aware of the non-identity of the germs or poison producing the two diseases. Niemeyer says: "That the germs which cause abdominal typhus may develop and multiply as well in the organism of a typhus patient as they would under

favorable circumstances outside of it." I am unacquainted with a case in which the two troubles followed each other in such rapid succession.

January 31, 1885.

Analects.

IMPRESSIONS OF THE CHOLERA AND ITS TREATMENT DURING THE RECENT EPIDEMIC IN FRANCE.

Dr. Benjamin D. Howard, of London, writes as follows in the *Medical Record:*

The general statistics of the recent epidemic, fortunately so limited and brief, are now as undisputed and as unattractive as a last year's almanac.

The impressions and lessons from a prolonged personal experience, however, in that epidemic may have an interest still fresh, and which unfortunately may increase as the winter recedes and the summer approaches.

The nature of the epidemic. In the rough its Asiatic character has, we all know, been long accepted universally as beyond dispute. Regarding its exact type in comparison with that which prevailed in Paris in 1865, and in New York in 1866—both of which epidemics I happened also to have a personal acquaintance with—the recent epidemic in Paris was, I think, more malignant. Premonitory diarrhœa was more infrequent; collapse occurred earlier; death quicker. In case of recovery, the symptoms generally assumed a typhoid character, delaying greatly the completeness of the recovery. Literally struck with the disease—seized at once with the symptoms of approaching collapse—I saw more than one patient die within six hours of the commencement of the attack, no sign of possible reaction having once appeared from the beginning to the end. One man I saw taken in this manner while promenading on the Boulevard, in whom the symptoms were so conspicuous, even to the cab-

men, that of eight or ten called, not one would take him or his fare.

The question now most conspicuous and pertinent is, What has this epidemic yielded in the way of improved treatment? There are three remedies, the value of which have been more or less taught or confirmed: Inhalation of oxygen, transfusion of saline solutions, and the spinal ice-bag.

Inhalation of oxygen.—The hospital St. Antoine, which had by far the larger number of cholera patients, was equally notable for the enterprise and enthusiasm in their treatment. Professor Hayem, the physician-in-chief of the contagious diseases service, with M. Bufflorg, his *chef-de-service*, concluded that as Professor Hayem had found such utility in the vomiting of pregnancy from the inhalation of oxygen, it might be well to try it in the cases of most persistent vomiting in cholera. When any ordinary internal remedy would have been at once rejected, the inhalation of oxygen, which is without risk or inconvenience, seemed in almost every case to diminish the retching and vomiting, and at the same time to somewhat diminish the sense of coldness. When ice pellets, sinapisms, Badejon phenicæ (?) blistering fail, it is worth knowing that the inhalation of oxygen may stop the vomiting quickly and entirely.

Transfusion.—In collapse with complete pulselessness this remedy, particularly at St. Antoine, was largely employed, and with great skill and enthusiasm. This operation was generally preceded and followed by a hypodermic injection of ether. The apparatus used was Roussel's. The solution generally used consisted of sodæ sulph., 10 parts; sodæ chlorid., 5 parts; and distilled water, 1,000 parts, at a temperature of 39° C., (102° F.) two or three litres being transfused in adults at one operation, this being repeated in some cases three times at intervals as seemed expedient. The results of this operation were nearly always very striking, and in one respect curious. After twenty or thirty strokes, each stroke injecting twenfy-six grammes, the lost pulse would

return, followed by an almost startling brilliance of the eyes, partial restoration of the voice, and a general appearance of improvement in other particulars, with one exception. Curiously enough, after the fiftieth or sixtieth stroke, the patient would usually complain of feeling colder; this complaint would often be corroborated by severe chills, which would sometimes be so persistent as to reach their height not till half an hour after the operation.

The urine, on its reappearance after transfusion, was apt to be for a time slightly albuminous.

The spinal ice-bag treatment.—This, I am glad to say, my friend, Dr. Chapman, had an opportunity of trying at La Charité, with a limited and small number of patients. From Dr. Chapman's experience with this treatment in a previous epidemic in Southampton, Professor Peter was induced to invite Dr. Chapman to try his method as I have stated. I did not see the patients while thus treated, but Professor Peter has expressed his satisfaction with the results. The extent and elaborateness of the system constructed by Dr. Chapman, upon the hypothesis of vaso-motor regulation and control by means of given temperatures applied to the spinal column, have doubtless hindered its acceptance. While nobody can deny the ingenuity of the theory, many hesitate to accept conclusions so extensive. By the recent experience at La Charité one practical point in connection with Dr. Chapman's theory has, so far, doubtless received demonstration.

The differnce between the treatment here in 1865 *and* 1884.—This, with the above-mentioned exceptions, is slight. Bismuth is used as before, but in grave cases in the form of the salicylate; for cognac have been largely substituted wine and water, eau de seltz and water, with bicarbonate of soda; for opium, laudanum; and for friction, hot flannels.

The progress made in the early treatment.—This cannot be said to be very great, and is too well illustrated by the following fact: A friend of mine, of the Faculty of Paris,

who has greatly distinguished himself in his microscopical and other investigations in connection with cholera, was complaining of very troublesome borborygmi and diarrhœa after unusual exposure in the cholera wards. In response to my anxious questions he informed me it was all right, that he had taken five grains of bismuth, and in answer to "Why bismuth?" "Well, you see, bismuth is innocuous; it acts mechanically, it coats and protects the diseased part." How five grains of bismuth could be so directed as just to cover the diseased part, and that only, implies a skill beyond my comprehension.

The practical lessons from this recent experience respecting treatment.—The general tendency to the adoption by preference of one method of procedure, and that alone, is for the patients a great misfortune. Should it become my duty to direct the treatment of cholera patients hereafter, without now pretending to state all I would do or avoid, I am quite sure I should use what in Paris I have never seen employed, *i. e.*, hot-air bath, the tube from the ordinary spirit-lamp apparatus projecting under the bedclothes in every case. While this maintained the general heat of the bed, hot bottles, hot flannels, and friction should be duly employed also according to symptoms. The supply of eau de seltz or other saline agreeable drink should be limited only by the desire of the patient to swallow it.

Oyxgen for inhalation should be constantly available, to be used in conjunction with or without ice pellets and sinapisms, as might or might not be expedient.

Transfusion appliances should be always ready; but for the chills supervening I would supply extra applications of hot air, hot flannels, friction, and hot drinks, if the latter could be borne.

Typhoid tendencies I would meet as in any other case, but with extreme delicacy and caution.

In a certain proportion of cases, not very severe, I should be tempted to try the spinal ice-bag, holding myself ready to relinquish it and to combine or substitute other measures at any moment.

The pathology of cholera.—As regards general lesions there has been nothing to remark; in only one instance did I observe any ecchymosis of the intestines. The microscopical conditions are too familiar for remark, each of the particular phenomena has of course been seen in the laboratories, and should others be described, doubtless they would be seen also.

The communicability of the cholera is a question upon which unanimity can scarcely be expected. To assume that the comma or any other bacillus is the one and only essential germ of cholera, and that this must reproduce itself or nothing, is doubless premature. Practically our concern regards the soil as much as the seed, and the means of sowing are many. During this recent epidemic it is said not one hospital physician or interne has had cholera. Admitting this to be true, the same may have been said many times concerning typhoid fever, scarlet fever, and small-pox. Further, while none of these fortunate individuals had typical cholera, I do not know one interne who had much work in the cholera wards but who, during the greater part of the time suffered from borborygmi, colic, diarrhœa, and in a manner unknown to him under ordinary circumstances.

Mr. McNamara relates how, in 1872, having in the morning been engaged in a close laboratory examining some monkeys to whom he had given cholera dejecta, before four o'clock of the same day both he and his assistant were attacked with cholera, extending afterward to collapse. In connection with the point I have mentioned, that many of those visiting cholera patients, though continuing free from typical cholera are victims of very disagreeable intestinal disorder, I may mention one fact which came immediately under my notice. A medical friend, in robust health, the day of his arrival in Paris from the seabord, was with me for about two hours in some rather close single cholera wards. Within one hour of his leaving the hospital he had involuntary diarrhœa, and for the several remaining days of his attendance in cholera wards, borborygmi, colic, and offensive diarrhœa persisted

in spite of treatment, and continued for four or five days after his return home. The day after his return his wife, from whom he had kept his hospital visits secret, was affected, and continued precisely the same way for five or six days; neither the one nor the other had what could be called cholera, but what both of them had could be traced to no other cause than the attendance of my friend upon patients who did have it. This is but one of several similar facts which have come recently under my observation, showing, as I think, that the essential element of cholera may have many varieties and infinite degrees of effect, according to the condition of the respective individuals, the most perfect adaptation and susceptibility existing only in a small minority of those who have been gradually prepared by continuosly bad hygiene or pernicious habits.

Toulouse being the only city on the European continent to this moment having a single accident horse-ambulance, patients going to hospital went there as best they could, usually, of course, in the first public cab that would take them, the few ambulance wagons for contagious cases, having been used chiefly for returning these patients to their homes after they were considered sufficiently recovered. So that while something was done to limit the spread of the disease, enough was left undone to allow it to extend itself, if it could do so, to any or all of the immense cab-hiring community of Paris.

TREATMENT OF MAMMARY TUMORS.

The larger our experience of tumors of the mammary gland becomes, the more do we see the uselessness of trusting to external applications of any kind to dissipate them. Iodide of potassium, iodide of lead, iodine, the oleates of lead and mercury, discutient lotions of chloride of ammonia with camphor, combined with compression, are at times of use in the case of small nodosities, chronic induration after inflammation, and small cystic

growths, but they more frequently fail, and unless growth is otherwise arrested, the use of the knife is sooner or later called for.

Lipomatous tumors, small cystic tumors, galactocele, adenomatous nodules, may remain for years if not permanently, without growing or giving rise to any pain or even uneasiness. And all such growths cause great uneasiness in the mind of the woman, and make her apprehensive and unhappy. I am not so certain that if the rule to completely remove any circumscribed growths from the mammæ, whether painful or otherwise, were generally acted on we would not be on the safer side than to temporise with any.

Take what pains we may to assure a patient of the harmlessness of any form of breast tumor, there is a natural fear of malignant disease which tends to make her mind dwell on its presence. Also, in the instance of cystic or sarcomatous growths we know sufficient of their liability to assume a malignant nature to make us, even after years of quiescence, wish they were out of the way of harm. The surgeon is perhaps more often in doubt as to the expediency of removal of the mere growth or of the entire mammary gland. His decision must depend on the homologous or heterologous character of the growth, its size, hardness, the puckering of skin, rapidity of growth, the extent of the gland involved, and the other features which make him suspicious of its malignant or sarcomatous nature. Small, circumscribed and encysted tumors of a benign type may be carefully removed, but if there are any reasonable grounds for apprehension that the disease is of a malignant nature, or likely to become so, or again, that the tumor is of large size, the best course is to amputate the breast. Encysted tumors containing fluid may be incised, and the cyst cavity treated with some stimulating fluid, as solution of iodine, carbolic acid or chloride of zinc. The nature of the fluid may be determined on previously, by drawing off a small quantity with a hypodermic syringe and examining it so as to ascertain whether it is serous, hydatid

or sanguineous. Hydatid tumors must be removed. *The one safe rule in all cases of malignant growth of the breast is early amputation of the entire breast.* If the axillary glands are enlarged, these should be carefully removed at the same time and the entire axilla cleared of all suspicious nodules. The association of eczematous inflammation of the nipple and malignant disease (Paget) must not be forgotten. In a well-marked case of this nature exhibited by me at the Pathological Society of London in 1881 the woman had suffered for over two years from excoriation of the nipple, and when she was admitted to the hospital there was an area of the circumference of a crown piece, including the nipple, of eczematous ulceration (eczema rubrum.) Close to the axilla was a hard mass of scirrhus, which had ulcerated, leaving a raw surface of the vivid red coloring of malignant ulceration. I removed in this case the breast, the incision being about ten inches in length, so as to include the entire of the scirrhous infiltration near the axilla. I dissected away all the glands and exposed the entire axillary vessels and glands from the apex to the floor of the axilla. The entire dissection of the axillary structures was as clean as if the part were prepared for demonstration. Yet in one year after the operation the patient returned to the hospital with a huge fungous mass protruding from the left side of the wound. (This specimen is in the museum of the Queen's College, Cork.) Only in one instance of extensive scirrhus have I operated in which there was no return of the tumor. The patient died of an attack of acute inflammation of the lungs about two years after the operation, and the breast had given her not the least uneasiness up to the time of her death. Yet it might have developed subsequently.

We may decide the question of operation on these grounds:

1. The size of the tumor and the degree of infiltration of the mammary tissues; the extent to which the skin is involved, as well as the condition of the axillary glands.

2. The general health of the patient and the coexist-

ence of malignant disease elsewhere, or of other serious constitutional disorders, as phthisis or uterine disease.

If we determine not to operate, we must palliate and relieve pain to the best of our ability by such means as compression, anodyne applications, as opium, belladonna, conium and hyoscyamus, in the form either of fomentation, ointment, or strapping, while both morphia and atropine or cocaine may be administered subcutaneously.

In conclusion, I would say in regard to any malignant or suspected malignant tumor of the breast, "Remove early, remove the entire breast, sufficient skin and all suspicious tissues and lymphatic glands.

Amputation of the breast.—Perhaps there is no operation in which the benefit of antiseptic surgery is more perfectly illustrated than in this. Union by first intention is the rule. To secure this result we should arrest hemorrhage by torsion, which, if properly carried out, and the wound is not closed until all the bleeding has ceased, I find is quite efficacious, and there is little fear of any secondary hemorrhage.

If ligatures are used let them be of carbolized gut.

Operate with every antiseptic precaution and dress with drainage tube, and the usual antiseptic dressings.

Use silver sutures or catgut to unite the margins of the wound ; remove a few of these if there be any undue torsion, within forty-eight hours after the operation.

Dress subsequently and daily under some antiseptic spray *until the wound has united.*

When the wound is healing cover it with a weak thymol or benzoated dressing and a thymol pad.—H. McNaughton Jones, in *Med. Press.—Lancet and Clinic.*

CAFFEINE AS A CARDIAC STIMULANT.

Caffeine has been used for some years in various combinations and for a variety of purposes. I do not think, however, that it has been as widely employed for its action upon the heart as its good effects in the hands of those who have prescribed it would warrant.

The operation of this drug augments the volume of the pulse and increases the urinary secretion, and it possesses no cumulative effect even in repeated doses.

Experimental evidence upon the frog seems to refer the physiological action of caffeine to direct stimulative operation upon the cardiac muscle, increasing the energy of the systoles, and also regulating their rhythm. In a recent article in the *Therapeutic Gazette*, November, 1884, by Dr. Dujardin-Beaumetz, the history of this drug has been concisely reviewed. The substance of observations of Trousseau, Rognetta, Dettle, and others claims the action of caffeine as accelerating the pulsation of the heart; while Caron, Meplaine, and Fossagrives assert that it slows the pulsation of that organ. Dujardin-Beaumetz also shows that caffeine was used by Zwinger, a Dutch physician, in 1725, in dropsy, and recently by Jaccoud and Gubler, who held that this drug is an ideal diuretic, not only in diseases of the heart, but also for the treatment of renal diseases with albuminuria.

My purpose is very briefly to relate my experience in its use after an extended trial of the drug. Granted the most satisfactory action of caffeine as a diuretic, like digitalis secondarily through its action upon the circulation, let me draw especial attention to its operation as a cardiac tonic.

Like digitalis, it is capable of producing a profoundly efficient stimulative effect even in advanced stages of cardiac degeneration. It is even more potential than digitalis in cases of extreme heart disease, in which digitalis frequently fails. It is difficult to explain this clinical fact since caffeine does not affect the vaso-motor nerves, a lack of which influence sometimes accounts for the failure of digitalis. More probably the superior action of one or the other drug in the above cases is merely a manifestation of the advantage of employing a new stimulant when the cardiac nerves have become insensitive to an influence of the same nature.

In my experience, caffeine has no influence as a cardiac regulator which is comparable to digitalis. This is unfor-

tunate, since it is undesirable to combine digitalis with caffeine, because the preponderating effect of digitalis is also as a cardiac stimulant, not regulative; moreover, we use caffeine usually only in cases in which digitalis has failed. The most effective combination with caffeine to secure its operation as a cardiac regulator, is strychnia. This drug, by stimulating the vaso-motor and respiratory centres, and possibly also the pneumogastrics, sometimes is a most desirable adjuvant to caffeine. It is also serviceable after the use of caffeine has been discontinued, for the latter is a remedy which is not suitable for prolonged employment as a cardiac tonic. The vascular system seems to grow accustomed to its operation, or even more frequently gastric irritation or dyspepsia necessitates its withdrawal. This objection cannot be urged against digitalis. Belladonna and convallaria come next in order as supplementary drugs.

The chief objections to the administration of caffeine arise from the gastric irritation, pain, and vomiting, which it occasionally provokes. This complication is not constant, but seems to present itself and contra-indicate caffeine in the same case in which the drug can be used with impunity at some other time. Symptoms of gastric irritation may appear even when caffeine is employed in small doses as well as in large, and compels its suspension or use by the hypodermic method. Toxic effects, such as confusion of the head with giddiness, have been mentioned by German authorities, but these complications have not embarrassed me.

I have found the most useful dose of caffeine has been four grains, administered three times daily. Sometimes, however, two grains, three times daily, have been sufficient, and in no case have I given more than fifteen grains per diem, my rule having been to use the smallest amount of the drug which would develop its characteristic action.

Abroad, very much larger doses seem to have been employed with impunity, and apparent benefit. Dujardin-Beaumetz observes that the good effects of the drug, when asystole is threatened, cannot be said to be exhausted unless

ten grains, three times daily, have been employed. Carl Becker and Riegel (*Wien. Med. Blatt.*, 5, 15, 1884) assert that even larger doses have been used without disagreeable consequences. I believe that unpleasant gastric symptoms might be expected if such large amounts should be prescribed. Caffeine should always be administered, not its so-called citrate. The basic properties of the drug are very weak, and, properly speaking, acetates, lactates, or citrates of caffeine do not exist. But two or four grains of these substances, with an equal amount of benzoate of soda, can be readily given as in the following formula:

℞.—Caffeine,
Sodii benzoati, ... aa gr. xv.
Elix. aurantii,
Aq. dest., ... aa ℥ ij.

Sig.—Teaspoonful dose.

The drug is, however, very efficient when used in pill form.—E. T. Bruen in *Medical News*.

CLINICAL OBSERVATIONS UPON DIPHTHERIA.

Dr. Ludwig Stumph, in an exhaustive study of diphtheria, extending over a period of twelve years, concludes as follows:

Diphtheria of the throat, nose, vagina, conjunctiva, and of the mucous membrane of all the external air-passages, is primarily a purely local disease. This primarily local disease can, in its further progress, lead to a general infection of the body. From the local nature of the disease, it is manifest that local treatment alone, and thus the subjugation of the disease at its primary point of appearance, will perfectly fulfil the present scientific aspects of its nature. By thorough and early local disinfection, for which inhalation offers the best therapeutic means, all that is possible is accomplished.

Against universal infection there is at present no remedy. It is possible that we shall eventually find a sub-

stance which, without injury to the blood and the vitality of the tissues, will exert a germicide effect npon the organism in the blood, though at this time there is no prospect of such discovery. The task of the physician is to pay attention to the primary local disease, and to concentrate the treatment upon this, and this must be the principal aim of his labor.—*Deutsches Archiv fuer klin. Medicin.—Med. News.*

VAGINAL EXTIRPATION OF THE UTERUS.

Dr. Schede's pet operation recently has been extirpation of the uterus for cancer. I have seen him make six such extirpations and all were successfully accomplished. His particutar method of procedure is briefly as follows: The uterus is pulled down as far as possible with strong hooked forceps, and a sound passed into the bladder follows the lower wall of that organ as a guide to the operator while he is dissecting the uterus away from its anterior attachments. A posterior cut opens directly into the peritoneal cavity, and then ligaturing his way along, the surgeon gradually separates the uterus and ovaries from their attachments and removes them en masse. The peritoneal margins are brought together with a puckering suture so that comparatively large surfaces are brought so into apposition that a firm union takes place between them. The mucous margins are then approximated to form a roof for the vagina, and all is ready for the dressing, which consists principally of an iodoform gauze tampon.—*Hamburg Letter in N. E. Med. Monthly.*

ATMOSPHERIC DISSEMINATION OF SMALL-POX.

Mr. Power, in his report on the spread of small-pox in the vicinity of the Fulham Small-pox Hospital, points out that the atmospheric condition preceding the outbreak that he specially investigated was favorable for the accumulation and deposition of particulate matter in

that locality. This condition he describes as damp, still and foggy. This view is contrary to the generally received opinion, which is, if the poison is conveyed at all by air, it is carried by strong currents of wind. It is interesting, therefore, to find that Mr. Power's observations with regard to the meteorological condition most favorable to the spread of the small-pox poison has also been recorded by some of the older writers on this disease. The most remarkable instance is that mentioned by Dr. Waterhouse, Professor of Medicine at Harvard College, in which the small-pox attacked simultaneously ten persons working in the same yard at Charlestown, which yard was opposite two houses at Boston, on the other side of the river, at a distance of 1,500 feet, in which were cases of small-pox. The day on which the infection took place was "one of those dull foggy days (such as commonly produce a dark day in London) when there was scarcely wind enough to blow the smoke from the top of the chimneys; yet what wind was stirring wafted it across the river to Charlestown." Another instance, too, is recorded in which "the atmosphere was for many days loaded with aqueous vapors," there being little or no wind; yet, in spite of the prevention by a military guard of all possible communication between the small-pox hospital and the neighborhood, the disease was conveyed a distance of "several hundred roods" from the hospital. In this case the disease must either have been conveyed through the air or by the visiting physician; yet this official before entering the building covered his head with a cap and his body with a linen gown reaching from his neck to his ankles; he even changed his shoes; whilst on leaving he was throughly fumigated, etc. The question raised by Mr. Power's report as to the possibility of the aerial dissemination of small-pox to a distance considerably further than has hitherto been supposed possible, is of great importance to the community; and with a view to the possible risk thus run, we think more attention ought to be paid to methods of disinfection, which would ensure the absolute destruction of particulate

matter rather than the continuance of turning the infected air of these hospitals into the general atmosphere, under the idea that dilution is sufficient to render the poison innocuous.—*Lancet.*

CARDIAC ANEURISM.

At a recent meeting of the London Pathological Society, Dr. Percy Kidd read a paper on four cases of Cardiac Aneurism. In the first case, which was that of a man, aged twenty-three, the aneurism of the undefended space was obviously of congenital origin, and due to imperfect development of the membranous part of the ventricular septum. The dilatation of one sinus of Valsalva was no doubt the result of atheroma. The second and third cases, which occurred in men, aged twenty-one and forty-three respectively, illustrated the influence of friction of pendulous vegetations against the cardiac walls, the resulting erosion of the endocardium being the starting-point of an aneurismal bulging. In both these cases there had been rheumatic fever, and great pain in the precordial region was a prominent symptom during life. In the fourth case, that of a man aged forty-seven, the aortic valves and aneurism were the seat of a marked fibroid change, and there were no traces of endocarditis. The patient had frequently had chronic rheumatism, but it is now well known that aneurism of the heart is dependent on a gradual yielding of some diseased part of its walls to the intracardiac blood pressure. Of the four cases under consideration, all but one were instances of aneurism resulting from endocarditis, acute or chronic, of rheumatic origin. In all four cases the aneurism occurred in males.

REMOTE PUERPERAL HEMORRHAGE.

Dr. Thomas stated, at a meeting of the New York Obstetrical Society, that he had recently met with two

cases of what the late Dr. McClintock called "remote delayed puerperal hemorrhage," and on which subject Dr. Mundé had lately written an article in the *American Journ. of Obstet.* The speaker had seen a good many such cases. Generally the uterus has contracted well after delivery, and nothing abnormal occurs until the ninth day, when the physician has ceased his daily calls. Thenceforth hemorrhage occurs after unusual physical efforts or mental excitement, and may be so severe as to require the tampon to check it. Or else, there may be a steady moderate loss of blood for eight to ten days until the patient is much exhausted. The following case is typical of a good many of that class.

Dr. Thomas was called in consultation by a German physician of considerable experience, to see a lady who had consulted the speaker ten months previous for a peculiar condition. Although married several years, and though both she and her husband were healthy and well formed, no intercourse had taken place on account of an aggravated form of vaginismus. An operation was performed, the patient left the hospital after one month, and nine months later gave birth to a child. Near the end of the seventh month of pregnancy, the veins leading from the labia majora enlarged considerably until the parts resembled a mass of earth-worms the size of a fist.

Hemorrhage set in on the ninth day after delivery, which her physician was unable to arrest by all the ordinary means. The tampon had not been tried. About three weeks after delivery a very profuse hemorrhage again occurred after the patient had got out of bed. The flow had stopped by the time her physician reached her. Each hemorrhage was preceded by the passage of a large blood clot. Dr. Thomas was now consulted, and he visited the patient three days later, fully prepared for removing the remains of membranes, although her physician was positive that the placenta, on careful examination, appeared perfect.

When the patient had been placed on the table and

the ether cone applied, she sprang up excitedly and could not be induced to continue the inhalation, as it had affected her badly on the occasion of the previous operation for vaginismus. Some of her friends desired that she should be compelled to take the anesthetic, but Dr. T. refused, because he had seen violent mania result under such circumstances. The operation was postponed till the next day, when Dr. T. etherised the patient, dilated the uterine canal, and with the curette removed three pieces of placenta, each the size of his index finger. The operation caused very little hemorrhage, and the speaker felt that with these remnants he had removed the cause of the trouble.

The points of interest in the case were: 1st, the vaginismus; 2d, the state of the veins of the vulva; 3d, the danger of giving ether during maniacal excitement; 4th, the usual cause, in Dr. Thomas' opinion, of the delayed puerperal hemorrhage and its proper mode of treatment.

No reliance can be placed on the statement that the placenta has been examined and found entire, for as a rule the examination is superficial, and small pieces may have broken off and remained behind, which the most careful inspection of the afterbirth would fail to reveal. In all cases of this class which the speaker had seen, the hemorrhage was due to retained placenta or membranes. —*Am. Journ. Obstetrics.*

Dr. M. W. Brubaker, of Charleston, Ills., says:

When in St. Louis, I procured a bottle of Papine; before reaching home, I took a very severe cold, with consequent coughing and decided mucous irritation of the lungs, with dry inflamed condition of the throat. After suffering much from irritating attacks of coughing, I thought of Papine, and took a couple of doses. The effect was immediate and most happy. The coughing quickly ceased, and the dry harsh condition of the throat and soreness of the lungs soon passed away. The effect of the remedy was a most signal success, and since then I have obtained similar results in other like cases.

Editorial.

IS SALTING THE STREET-CAR TRACKS DANGEROUS TO HEALTH?

For several years an ordinance has been upon the statute-books of Baltimore, prohibiting, under a heavy penalty, the salting of street-car tracks to promote the disappearance of snow after a heavy snow storm. Just why this ordinance was passed does not seem very clear. The car companies complain that its enforcement subjects them to great loss, and the public to much inconvenience and delay, because, during a heavy snow, travel becomes more difficult, teams must be doubled, and cars can only be run at longer intervals. As a consequence violations of the law are frequent, and although the prescribed penalty is imposed when the violators are arrested, the impunity secured by the payment of a fine must ultimately produce contempt not merely for this, but for other laws.

The frequent snow storms during the present winter, and the obstruction to street-car travel produced by them, have brought both the ordinance and its violation into prominence, and caused considerable comment. We have made numerous inquiries upon the subject, and have noted some of the reasons given for the existence of the law. The most prominent are the following:

It is said by some that the salt water formed by the rapidly melting snow causes the hoofs of horses to become brittle, and crack. Others say that the hoofs are rendered soft and tender by the salt water and that this causes the animals much suffering and impairs their usefulness. It seems to us that the contradiction involved in these two objections to the practice destroys their effectiveness as arguments. If either of them were true, the car companies' horses would suffer most, because more constantly exposed to the acting cause. The loss to the companies, by the diminution of the value of their stock, would more effectually deter them from violating the ordinance than the imposition of the fine.

We have heard it asserted that salting the tracks increases the prevalence of pleurisy, bronchitis, pneumonia, and more especially diphtheria. So far as the first two are concerned, all physicians know that anything which greatly chills the surface is likely to produce them, and that tramping in snow water with leaky shoes is likely to be followed by ill results, whether the snow is melted by salt or by the sun. Concerning pneumonia, we have long regarded it as an infectious disease, and no more dependent upon meteorological conditions than malarial fever. In support of this it may be stated that acute pneumonia does not seem to be especially prevalent during the coldest months. Finally, so far as diphtheria is concerned, experience has taught that this disease is spread almost solely by contagion or infection, and that its greatest prevalence during the winter is rather attributable to the schools, crowding in tenements, defective ventilation and similar conditions increasing the facility for contagion. Persons whose occupations compel them to be out of doors in all sorts of weather may suffer from tonsillitis and other forms of sore throat, but they rarely have diphtheria. The elaborate research into the relations of the weather to diphtheria by Dr. R. H. Thomas (*Trans. Med. and Chir. Fac. of Md.*, for 1883) shows no definite relation between low temperature or snow-fall and that disease. In fact, the average number of deaths from diphtheria in this city is greatest in October, November and December, months in which there is usually little or no snow, while in January and February when we have most snow, the diphtheria death-rate declines sharply, being about 25 per cent. less in January and about 30 per cent. less in February than in either of the three preceding months.

The facts indicate that the usual objections urged against the practice of salting the car tracks are not based upon trustworthy data. We do not believe that the practice is at all harmful either to man or beast, and we hope the absurd ordinance may soon be repealed.

Current Literature.

Manual of Nervous Diseases, and an Introducdion to Medical Electricity. By A. B. Arnold, M.D., Prof. of Diseases of the Nervous System and Clinical Medicine in the College of Physicians and Surgeons, Baltimore. With illustrations. New York: J. H. Vail & Co., 1885. Pp. 170.

Within the brief space of 170 pages Prof. Arnold has written an exceedingly useful manual of a very important class of diseases. The ground is thoroughly covered, there being chapters on the anatomy and physiology of the nervous system, giving a succinct account of the modern researches on brain localisation, general symptomatology, medical electricity and articles on the special diseases.

The style is condensed and vigorous, and the various diseases are very graphically described. We call especial attention to the chapters on Progressive Muscular Atrophy, Cerebral Hemorrhage, Epilepsy and Hysteria.

To the student attending lectures or preparing for the final examination, or to the busy practitioner who has neither time nor inclination for the more bulky works on this specialty, Prof. Arnold's Manual can be confidently recommended.

Notes on the Opium Habit. By Asa P. Meylert, M.D. Third edition. New York: G. P. Putnam's Sons, 1885. Pp. 47.

An interesting brochure, containing many practical hints on the management of a troublesome class of cases.

Lessons in Longevity. By John B. Hamilton, M.D., Surgeon General, U. S. Marine Hospital Service; Professor of Surgery in the University of Georgetown, etc Washington, Wm. H. Morrison, 1884.

This little volume contains a number of brief, chatty essays, originally printed in a weekly paper published

in Washington, and now collected and revised. The essays were written with the object of teaching the laity that "longevity is not only possible, but in a great degree in one's own control, subject to natural law." This theme is kept in view throughout the book.

Flotsam.

A FEE in the pocket is worth two in the book.

ALWAYS notify the editor of any change in your address.

THE *Index Medicus* has been discontinued for lack of support.

WE would like to suggest a new commandment. It is: *Pay your subscription when it is due.*

WE would call attention to the advertisement of a physician's practice for sale. See advertising pages.

GARLIC is said to be a remedy against hydrophobia. Of course it is a Spaniard who recommends it.

A SATURATED solution of hydrochlorate of cocaine in nitric acid is said to make a perfectly painless caustic.

THE President has appointed Dr. Stanford E. Chaillé a member of the National Board of Health, to fill the vacancy caused by the death of Dr. Bemiss.

SUTURES can be rendered aseptic by soaking them for two days in a ten per cent. ethereal solution of iodoform, and drying by wrapping them in blotting paper.

PROF. HYRTL, the veteran anatomist, recently celebrated his 74th birthday. Although put on the retired list by the Austrian government, he is still in vigorous mental and bodily health.

THE thirteenth annual commencement of the College of Physicians and Surgeons will be held in the Academy of Music in Baltimore on the 13th of March. The alumni meeting will be held at the College on the day before, when the award of prizes for the best essays presented will be made.

Mr. Lawson Tait seems to be immensely pleased with his recent trip to this country. He has no end of pleasant things to say about us in a paper read before the Birmingham Medical Society, on his return home.

In a case of cerebral tumor in one of the London hospitals, Dr. Hughes Bennett diagnosticated the location of the growth, which was removed by Mr. Rickman J. Godlee. This is the first instance of the extirpation of a cerebral tumor on record. The patient recovered from the immediate effects of the operation, but subsequently died of inflammation of the brain.

In compliance with numerous requests we return in this issue to the broad-columned leaded page of the first volume of the Chronicle. The journal is further enlarged to 32 pages of reading matter. With new type, a new press, accurate composition and first-class press-work we think we are furnishing the handsomest and best medical journal for the price, published anywhere.

The use of benzoic acid to correct alkalinity of the urine is sometimes impracticable on account of the objection which some persons have to taking it in solution, with borax. In these cases it can be given in pill form made according to the following formula:

℞. Benzoic acid, ... 3 ss
Confection of roses, ... q. s.

To make twenty pills. Two to be taken 3–4 times a day.

Horace Greely is said to have written somewhat as follows to a young writer who asked his advice: "When you have written anything, read it over carefully, correct grammatical errors, punctuate accurately, and if you come across a passage which you think particularly fine, *run your pen through it!*" This advice of the sage of Chautauqua is more applicable to medical writers than to any other class. In medical writing only facts are desired; let them be stated as plainly or bladly as may be; they will tell their own story to the appreciative reader. Don't try to imitate the style of the fourth of July oration.

—THE—

MEDICAL CHRONICLE.

BALTIMORE, MARCH, 1885.

Original Articles.

ARTICLE I.

THE SYSTEM OF SEWAGE DISPOSAL IN BERLIN, GERMANY.

AN OBJECT-LESSON FOR SOME AMERICAN MUNICIPALITIES.

By WALTER WYMAN, M. D., Surgeon U. S. Marine Hospital Service.

The new system of sewerage in Berlin was begun in 1870, was developed gradually, has been fairly in operation for eight years and now includes seven of the twelve districts into which the city has been divided for sewerage purposes.

The plan contemplates in each district a pumping station, where all the sewage of the district is received and pumped thence to the irrigation fields, some twelve or fifteen miles distant. Seven pumping stations have been established, but five only are in actual use. The irrigation fields or *rieselfelder* are four in number, three only being utilized, and are located to the north, north-west, south and south-east of the city. The four fields contain 5,500 hektares, or 14,666 acres of land.

For more minute details than are contemplated in this paper, the reader is referred to the following works published in Berlin:

1.—"Canalisation of Berlin," by James Hobrecht, published by Ernst & Korn, with plates.

2.—"Statistisches Jahrbuch der Stadt Berlin for 1882, Von Richard Bockt." Gives financial statistics.

3.—"Verwaltungs-Bericht des Magistrats zu Berlin,

April 1, 1883 to March 31, 1884." For economic reports, chemical analysis, etc.

It will serve the present purpose, however, simply to give such facts and impressions as I personally received during a day spent in visiting the pumping stations and the fields. Being kindly furnished with a letter from Consul General M. S. Brewer, I was shown every attention at the office of the Director General, where the system was explained by means of diagrams, and an officer subsequently detailed to accompany me to one of the pumping stations.

Of the two stations visited, it will be more interesting to describe the one which operates the drainage from the most central section of Berlin, viz: the third section, which includes the Unter den Linden with its palaces, and a densely populated commercial district as well. This station is the oldest, though not the largest of the five now in use. One might suppose that its location would be in some out of the way place, but we were surprised to find it in a desirable portion of the city not specially removed from other buildings and only a three minutes walk from one of the finest railway stations in Europe—the Anhalter Bahnhof. The buildings, grounds and brick fence had a neat and orderly appearance, not unlike that of a well-conducted manufactory.

In the yard I was first shown the large cistern or *sandfang* into which is poured, and through which is strained the sewage of the whole district—sewage of all kinds with the flush and rain waters. The district, or section No. 3, has a population of 130,000 and the quantity of sewage pumped here (in fluid state of course) is about 16,000 cubic metres every twenty-four hours. On Saturdays the quantity is increased to 20,000 or 30,000 cubic metres.

It requires but an hour and a-half or two hours for all excrementa and other sewage to get from the place of deposit to this sandfang, and so great is the quantity of water that by the time the cistern is reached the excrementa are in thorough solution. The water dilutes and

renders them inoffensive and they are pumped out of the way before putrefaction begins. It has been shown that in 500 cubic metres of the fluid there is one cubic metre of solid matter, and in fact this fluidity of the sewage and its very rapid removal seem to be the two features which make this system successful.

The sandfang or cistern has a capacity of about 5,000 cubic metres, its dimensions being five metres in depth and twelve metres in diameter; its location is but a few yards distant from a busy street, and not more than twenty steps removed from the front entrance of the local manager's residence. It is loosely covered with boards an inch or more apart, and upon stepping upon the platform we failed to notice any odor. No sickness has been caused by it either in the residence or among the laborers. Occasionally, though not often, it is necessary to flush it with water.

An attendant raised a few of the planks to give us a view of the contents. It appeared about half full of simply a muddy looking fluid, a bucketful of which was hauled up and emptied back to show that it was liquid only, and without stench. The canal opening was visible through which the fluid was discharging into the cistern with a good current. The opening is elliptical in shape, its longest and horizontal diameter measuring 3.40 metres, and its shortest or vertical diameter 2.90 metres. The fluid is not pumped directly from this cistern but has to pass into a suction pit some thirty or forty feet nearer to the engines. The outflow channel has the same capacity as the one just mentioned but its mouth is on a higher level and differs too in shape, being imperfectly elliptical, with the longest diameter vertical instead of horizontal.

Between the two openings and dividing the cistern into two equal parts is an iron grating or strainer, the bars of which are perpendicular and two centimetres apart, and serve to catch paper, rags, etc., which are scraped out every day or two and burned in the boilers. The fluid thus strained passes into the suction pit just

mentioned, where there are six cylinders or suckers operated by the six engines of the station. The pit was opened for our inspection, and though the fluid was in agitation there was no odor. Connected with the pit is an overflow for use when the rainfall is so great that the engines are unable to pump off as rapidly as the fluid collects from the sewers—which event happens twelve or fifteen times a year, with about an hour's duration each time. The overflow discharges into the river Spree, a small stream that flows through Berlin in two or three branches. We were next shown into the boiler-room containing six boilers, and into the adjoining engine-room with the same number of engines. The latter room is 75x45 feet and is handsomely finished. The engines run day and night (for it will be remembered that there is no detention of the sewage at the station), one engine being held always in reserve. There are gauges in this room showing the height of the fluid in the sewers and sand-fang, and the amount of pumping to be done can be estimated.

Having thus learned how the sewage is collected and disposed of at the pumping stations, we were now prepared to observe the other half of the system, viz: its transmittal through the pipes or *druckleitung* to the *rieselfelder* or irrigation fields.

Taking the cars at the Anhalter Bahnhof a ride of twenty minutes brought us to the village of Lichtenfelde, the nearest railway station to the *rieselfelder*, which are about three miles distant. Lichtenfelde is a country place of ordinary appearance, with nothing about it to indicate the proximity of any nuisance. The country round about is as level as an Illinois prairie.

As we approached the fields on foot (we were unable to get a conveyance) our alæ nasorum were elevated to an angle of expectant attention and three Schneiderian membranes were on the qui vive to condemn the first polluted zephyr from the suspicious territory about to be explored, but there was no zephyr of the kind aforesaid. Presently we were on the borders of the fields and made our way

to a small collection of houses called Osdorf, inhabited by laborers, etc., with their families, to the number of about one hundred people. Finding the main building and office, our permit insured us polite attention and a demonstration with diagram of the method of sewage distribution and disposal of the surplus water.

On going into the fields after first noting the absence of odor, (and the day was mild) our next surprise was the entire absence of machinery. The pumping force of the engines in Berlin is sufficient to throw the fluid to two central distributing points through channels measuring respectively one metre, and seventy-five centimetres in diameter. From these two central points distributing pipes radiate in every direction for a certain distance, connecting with the open courses or ditches which extend through the fields. At the point of junction of the pipes with the ditches, valves are provided for regulating the flow.

There is no reservoir in the *rieselfelder*, the sewage being distributed as fast as it is received. But it sometimes happens that the valves of a number of distribution pipes are closed and at the same time an unusual amount of pumping is required at the station in Berlin, thus causing a sudden excess of sewage. To relieve this, at each of the two central points just named there is erected a stand-pipe provided at the top with an overflow which discharges into neighboring shallow basins, sixteen in number. These stand-pipes, with their covering, have the appearance of small towers, their tops being twenty-one metres above the level of the city. The plain around Berlin is thirty or forty feet above the city level, and these pipes themselves are about thirty feet above the level of the plain.

A watchman is constantly on duty at each tower to give notice of an overflow by means of a bugle, calling upon the workmen to open all the valves. An automatic arrangement gives the same notice by means of a flag, or at night, a lantern.

The fields over which we were looking contain 5,000

morgen or 3,333 acres; one morgen being two thirds of an acre. They receive the sewage from sections 1, 2 and 3 of the twelve sections into which Berlin is divided. Five thousand cubic metres of liquid are distributed into them every twenty-four hours, of which 25 per cent. remains as deposit and 75 per cent. flows off as water. We were informed that for every 500 persons, there is required about four *morgen* of land or $2\frac{2}{3}$ acres, and that the area of irrigation land required is about one and a-half times the surface of the city drained. The fields are very level and divided off with some degree of regularity by avenues lined with small trees, and further by ditches and furrows, giving to the whole a tesselated appearance. The sections are of two general sizes, the larger called meadows, being used for raising grass, and the smaller called beds, for the growth of vegetables.

We inspected a particular meadow containing about four acres, and questioned a laborer at work on one of its ditches. It had been flooded four days before and was to be flooded again the following day. Its soil appeared simply dark and moist; a ditch surrounded it, two feet in width and one and a-half feet in depth, through which the sewage fluid was slowly running The currant was made stronger, indeed quite forcible, by turning a valve at one corner of the meadow where the open ditch connects with the distribution pipe. To flood the meadow the current is put on at full force and the surrounding ditch opened at various points on the meadow side. This particular meadow gave five cuttings of grass last summer. We saw others that had just been flooded having the appearance of shallow ponds. About three days time is required for the disappearance of the water.

Besides grass, rye, oats, wheat, hemp and corn are raised; and in the beds, sugar beets, carrots, turnips, cabbage and chicory. Cows are pastured in the fields and are all healthy. The laborer, who has been employed here for five years, asserted that there is no sickness common among the workmen, except rheumatism, caused

by working on moist ground—that sometimes in the summer strangers complain of the odor but the workmen never. The odor is chiefly experienced in the morning when the stop valves are opened, allowing the exit of gas that has accumulated in the pipes during the night. This passes off after the fluid runs a few moments. There is some stench also when the ditches are cleaned out, as they must be occasionally.

The remaining point to be explained is the method by which these beds and meadows are prevented from becoming marsh-like and soggy, in other words the drainage. They are all underlaid by porous drain tiles placed one or more metres below the surface. Where the soil is sandy the tiles are about seven metres apart; where it partakes more of the nature of clay they are but three metres apart. The water collects in the tiles, runs into receiving ducts which empty into a main ditch. This ditch discharges into a small stream that flows into the river Havel, near Potsdam. As Potsdam is the summer seat of royalty, and the Emperor's summer palace 'Babelsberg' is located directly on the Havel, the statement may be more readily believed that the water discharging into the Havel is clear, inoffensive and free from deleterious matter.

As to the cost of this system, my information is, that the canalisation and other preparation of the five sections of Berlin in which it is employed, cost the sum of 34,598,405 marks or $8,600,000; while the *rieselfelder* or irrigation fields cost the city for 4,835 hektares or 12,894 acres, the sum of 10,763,460 marks or about $2,690,865. Some idea of the yearly running and casual expenses may be obtained from the expense of the third section for the fiscal year ended April 1st, 1884, which was 124,191 marks or $31,047. This section, the one we inspected, contains 3,002 buildings and a population of 130,000. If the proportion of houses to inhabitants appears small to an American, the universal custom of living in apartments or flats must be remembered. The houses are correspondingly large.

The following statement is from the Jahrbuch for 1882 (published in 1884):

Expenditures for the Five Sections for Five Quarters or one and one-quarter years.

The five sections contained 10,549 buildings.

A.—Cost of Pumping Stations, Salaries, etc., 111,666 marks; Running Expenses, 257,512 marks, of which 161,198 marks or $40,299 was for coal.

B.—Street Draining and Water Supply for Sewers, Salaries, etc., 108,118 marks; Running Expenses, 129,470 marks, of which 68,950 marks or $17,237 was for water. Total, 606,766 marks or $151,691.

The *rieselfelder* yield an income, though they do not pay current expenses. Prison labor is employed on the fields; five hundred and twenty prisoners having been thus employed last year.

In the Osdorf *rieselfelder*, which appear to be the most productive, the total receipts during the last year were 215,955 marks or $53,988, while the total expenditures were 216,517 marks or $54,129, or an excess of $141 over the receipts.

Altogether the system as we observed it made a favorable impression. At only one place was there any unpleasant evidence of the work that was going on. This was at the overflow basin adjoining the stand-pipe in the fields, but it was not excessive.

Public opinion upon the system is somewhat divided in Berlin, a fear being entertained that in time the *rieselfelder* will be obnoxious. At present, however, there is every appearance of success, and the fact that the system has grown with the new growth of the city, (for Berlin, now numbering 1,200,000 inhabitants, is said to have increased its population one third since 1870) and is still being extended, is proof that the authorities regard it favorably.

Old Germans returning from America after ten or twenty years absence express surprise at the wholesome change wrought in the sanitary condition of the city, and it is claimed that the health of the sections in which it

has supplanted the old cess-pool system, has been improved.

It is considered significant that the river Spree flowing through the city contains many more fish than ever before. Certainly Berlin is a clean city. Rapidity of disposal and without offense are two characteristics of its sewerage system, and water, earth and air all in the greatest abundance seem to solve for it the great sewerage question.

Yet in estimating the positive value of the system, one must not forget the conditions, both adverse and favoring, which led to its adoption in Berlin. In the first place Berlin has no large river to receive its sewage nor is it near the ocean or any large body of water. It is built in the level valley of the river Spree, which flows through a large plain. The city is very flat and on a lower level than the surrounding plain, but the soil of the latter is sandy, making the best sort of ground for the *Rieselfelder* or the filtration of sewage fluid.

These conditions, of course, have had a deciding influence in the selection of a system whose actual value time will do much to demonstrate.

BERLIN, February 10th, 1885.

ARTICLE II.

DISINFECTANTS.

PRELIMINARY REPORTS OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

II.

COMMERCIAL DISINFECTANTS.*

BY GEORGE M. STERNBERG, M. D., Surgeon, U. S. Army.

In conducting the experimental investigations of the Committee on Disinfectants, the writer determined at the outset, in the interest of health officials and of the public, to ascertain the comparative value of the various commercial disinfectants in the market. In a recent

* Medical News, February 7, 1885.

paper by Wynter Blyth, Medical Officer of Health for Marylebone, in which the commercial disinfectants, exhibited at the London Health Exhibition, are intelligently discussed, we find the following:

"Rampant rides the quack in the fields, both of preventive and remedial art. Quackery takes a well-known common powder, labels it with a grand mystic name, selling bright copper at the price of gold. Quackery finds a stink outstinking feebler stinks, and gives it forth as a disinfectant. Of all the substances gathered together under the name of disinfectants—solids, vapors, gases, and odors—a small percentage alone possess any value.*

This statement applies as well to many of the articles advertised as "disinfectants" in this country. But in justice to the manufacturers of these so-called disinfectants, we must say that many of them which are of no use in the sense in which we use the term are valuable as antiseptics, or as deodorizers, and that there is good authority for calling a substance which will prevent putrefactive decomposition, or which will destroy bad odors, a disinfectant. Many chemists and physicians use the word in this sense, and this is the popular acceptation of the term both in this country and in Europe. We, therefore, cannot find fault with those manufacturers who see fit to use the word as synonymous with deodorizer or antiseptic, but we must caution the public that a disinfectant from this point of view does not necessarily destroy infectious material; and that the word is used by this Committee in accordance with the definition given by Dr. Rohé in the preceding paper.

It has been proved that certain kinds of infectious material owe their infecting power to living micro-organisms, which in a general way are often spoken of as "germs." A disinfectant, therefore, which destroys this kind of infectious material may be called a *germicide*. If all infectious material owes its specific infecting power to the presence of living organisms, then, from our point of view disinfectant and germicide are synonymous terms. But in the absence of satisfactory proof that such is the fact,

*Med. Times and Gaz., London. Oct. 11, 1884.

we must consider the former term one of general application, while the latter is only applicable in those cases in which the infecting agent has been proved to be a germ. But in our tests of disinfectants we are obliged, for the most part, to depend upon experiments which determine germicide power and in the experiments reported below, only biological tests have been used. As a matter of fact, those agents which by laboratory experiments have been proved to be the most potent germicides, have by the experience of sanitarians, by tests upon vaccine virus, septicæmic blood, etc., been shown to be the most reliable disinfectants.

Evidently there can be no partial disinfection; either the infecting power of the material to be disinfected is destroyed, or it is not. Where the object is to destroy disease germs in the sputum of patients with diphtheria, in the discharges of patients with typhoid fever, etc., so that no development shall occur when these germs find a proper nidus, incomplete destruction will be a waste of ammunition, for so rapid is the multiplication of these low organisms that the question of numbers is of secondary importance. It is therefore essential, in an experimental inquiry of this kind, that the most rigid tests may be applied, and that we keep on the safe side in the practical application of those agents which withstand these tests.

In our experiments below reported, the material which has served to test the germicide power of the agents named is "broken-down" beef-tea, exposed in the laboratory for several days, and containing a variety of putrefactive bacteria and their spores. The spores of *Bacillus subtilis* are also invariably present in this stock, and when a certain agent is successful in destroying all other microorganisms, we frequently have in our culture-solutions a pure culture of this bacillus, which is noted for its abundant and wide distribution, and for the great resisting power of its spores. In order to meet the objection of those who are likely to cavil because no "disease germs" are present in the material mentioned, a culture

of *Bacillus anthracis* containing spores is added to this stock solution. It is well known that anthrax spores constitute one of the most difficult tests of germicide power; not more difficult, however, than the spores of *B. subtilis*. We may safely assume, then, that an agent which will destroy these spores will also destroy all known disease germs, and probably all organisms of this class, known or unknown. The micrococci and bacilli not containing spores are far more easily destroyed.

The time of exposure to the disinfecting agent in all of these experiments has been two hours. And the amount of material to be disinfected has in every case been made equal to the amount of the solution of the disinfecting agent under trial. Thus to test an agent in the proportion of fifty per cent., a certain quantity—10 cc.—of the agent undiluted (100 per cent.) is added to an equal quantity of the broken-down beef stock described. If we wish to test the agent in the proportion of four per cent., an eight per cent. solution is made, and this is added to an equal quantity of the stock, etc. The mixture is placed in a wide-mouthed bottle containing 25 cc. and is set aside for two hours. A minute quantity of the material is then introduced into two little culture-flasks* (all experiments are made in duplicate) containing sterilized beef-tea, and these are placed in the oven, which is kept constantly at a temperature of 36° to 38° C. (96.8° to 100.4° F.). My method has been explained in detail in a paper relating to an extended series of experiments of a similar nature, published in the *American Journal of the Medical Sciences* for April 1883.

These experiments on commercial disinfectants have been very carefully made, under my direction, by Dr. Duggan. The samples were, for the most part, obtained for me by Dr. Raymond, Health Commissioner of Brooklyn, in the cities of New York and Brooklyn. As the experiments are made in the interests of the public, special pains have been taken to secure samples such as

* The flasks are all made in the laboratory, and are of the form described in the chapter on Technology in my book—*Bacteria*.

are placed in the market, and the rule was adopted at the outset not to test samples sent to us by the manufacturers, but to purchase ourselves such packages as are offered for sale by druggists and other dealers.

Numerous experiments were made, but only those are recorded here which fix the limits between success and failure. In four instances, a failure occurred in the proportion of 50 per cent., *i. e.*, when the undiluted solution was added to an equal quantity of the test-material. These agents were at once dropped without further trial. In the table, the agents are arranged with reference to their relative efficiency.

List of Commercial Disinfectants Tested.

Name upon Label.	Per cent. in which active.	Per cent. in which failed.
Little's Soluble Phenyle (Morris, Little & Son, Brooklyn),	2	1
Labarraque's Solution (*Liq. sodæ chlorinatæ*); name of manufacturer not given.	7	5
Liquor Zinci Chloridi (Squibb's,)	10	7
Feuchtwagner's Disinfectant (L. Feuchtwagner & Co., New York).	10	8
Labarraque's Solution (from Freré, Paris),	15	10
Phenol Sodique (Hance Bros. & White, Philadelphia).	15	10
Platt's Chlorides (Henry B. Platt, New York),	20	15
Girondin Disinfectant (James Meyer, Jr., New York),	25	15
Williamson's Sanitary Fluid (D. D. Williamson, New York,)	25	20
Bromo-chloralum (Bromo-chemical Co., New York,)	25	20
Blackman Disinfectant (Blackman Disinfectant Co., New York),	30	20
Squibb's Solution of impure Carbolic Acid (about two per cent),		50
Burchardt's Disinfectant (J. H. Harty & Co., New York),		50
Phenol Sodique (7 Rue Coq. Héron, Paris),		
Listerine (Lambert & Co., St. Louis),		50

I append to this list the report made by Wynter Blyth (loc. cit.) upon certain commercial disinfectants exhibited at the London Health Exhibition:

"*Various tar-acid disinfectants.* Jeyes's perfect purifier, the concentrated carbolated creasote of Messrs. D & W. Gibb, the kresylene described by Messrs. Mackay & Co., as a preparation of coal-tar creasote, pixene, and the thymo-cresol exhibited by Messrs. Ness & Co., have all the property of emulsifying with water. Jeyes's purifier was for some time tried in St. Marylebone urinals and drains, but the deposit left on the surface with which it had been in contact was found difficult to cleanse and inconvenient. I have made some experiments on anthrax in the spore state with the 'perfect purifier.' The solutions used were five to ten per cent.; the 'fluff' had to be freed from the tenacious fawn-colored deposit by alcohol. The result was very similar to what might have been predicted from results of experiments on the pure tar-acids, viz., growth was a little delayed, but never destroyed."

"Mr. James Wheeler's pixene I was on the whole favorably impressed with. He claims to have condensed the whole of the volatile constituents of pure tar, and to have presented them in a form readily miscible with water. . . . Anthrax spores soaked in a ten per cent. solution did not grow for some time."

"*Carbolic acid powders.*—I have experimented on anthrax with Calvert's, Jeyes's, and McDougall's powders; but even when a paste was made with the several powders; and the infected "fluff" allowed to remain therein twenty four hours, no sterilization resulted."

Similar powders were obtained by our Committee in New York and Brooklyn; but I have not thought it worth while to make any experiments with them, as sawdust, or other material saturated with impure carbolic acid, or with the volatile constituents of tar, can have no great value, in view of the low disinfecting power of these agents minus the sawdust. An agent which has gained considerable reputation in England is referred to as follows by Blyth:

"*Sanitas.*—Of all the substances introduced under the the name of disinfectant, this is the most pleasant. Sanitas is chiefly in the form of sanitas oil and sanitas fluid; peroxide of hydrogen, thymol, camphoric acid, and tere-

bene enter into their composition. Of the numerous sanitas preparations, liquid and solid, the oil seems to be the most active. Nothing replaces or destroys so rapidly the unpleasant odor which tenaciously adheres to hands contaminated by offensive animal matters. It is also to be commended for use in stables, and as a corrective for dung-heaps, and of the sickly smell at times rising from the Metropolitan wood pavement. I made many experiments with sanitas on anthrax. Spores soaked in sanitas fluid for twenty-four hours grew afterwards very freely. Spores placed in the undiluted emulsion, and afterwards removed, seemed at first to have their growth delayed, but in forty-eight hours growth commenced, and ultimately became luxuriant. The oil itself gave similar results. Sanitas powder was also tried, but with no better success."

Returning to the disinfectants in our list, it will be seen that all but the four last-named are efficient in various amounts, ranging from 30 to 2 per cent. But the relative value of the agents as here given does not establish their comparative practical value as disinfectants. Questions of cost, physical and chemical properties, etc., come into the account which it is the province of other members of our Committee to consider. The agent at the head of the list, for example, notwithstanding its superior germicide power, does not seem to me to be as useful as some of those below it, on account of its insolubility and comparatively high price.

We have nothing to say against the use of any of the agents in our list as antiseptics or as deodorizers. No doubt all of them are more or less useful for this purpose, and we have no desire to restrict their use.

But the exaggerated claims made in relation to the germicide, or disinfectant power of certain of these agents, may do immense harm. Thus, one agent advertised as a "germicide" *par excellence*, "Pasteur's marvellous disinfectant," failed after *two hours' exposure* to kill the organisms in our test-solution in the proportion of twenty per cent. Yet this fluid is, by some contrivance, to be thrown into the water-closet of every germ-fearing citizen when he pulls the handle, so that it may catch the germs on the fly and extinguish their power for mischief

before they reach the sewers. On the whole, the proprietary disinfectants have turned out better than I anticipated, and any one of the eleven first-named may be used in conformity with the conditions imposed by the experimental test for disinfecting sputum or excreta. For fecal matter, however, it will be best to employ an agent which is successful in the proportion of ten per cent., for example, in at least twice this strength, and in quantity considerably in excess of the material to be disinfected. It must be remembered that in our experiments the germs are suspended in a fiuid and this is thoroughly mixed with the disinfectant.

The second agent in our list is the well-known *liquor sodæ chlorinatæ.*

Our experiments lead me to think that this time-honored disinfectant is worthy of more attention than it receives to-day, when so many other agents of inferior value are being pushed by enterprising manufacturers. Our two samples differ greatly in their disinfecting power, which depends upon the amount of sodium hypochlorite present. Dr. Duggan has prepared, and experimented with, a solution containing six per cent. of available chlorine, which prove to be efficient in the proportion of one per cent. I am informed that a solution containing two per cent. of available chlorine could be put in the market for less than forty cents per gallon. Whether this is to be the disinfectant with which we shall fight cholera, must be determined by my colleagues who take up the question from a practical standpoint. But whatever agents are determined to be the best, must be so cheap that they may be obtained by the gallon and used without stint. The time has passed when *pater familias* can complacently congratulate himself upon having disinfected his house with a bottle of carbolic acid which he has brought in his vest-pocket from the corner drug-store.

In view of the efficiency and cheapness of the hypochlorites, I have requested Dr. Duggan to give special attention to these agents, and to prepare a report embody-

ing the results of his biological tests, and such information relating to the *modus operandi*, chemical characters, and available tests of strength, as may be useful to health officers and to the public.

ARTICLE III.

PYEMIA FROM OPERATION WOUND.

Dr. J. D. Mulhane (C. P. S., class of 1883) writes the Chronicle an account of an accidental inoculation followed by rather serious consequences, of which he was the subject last spring. During the removal of a tumor from the inferior carotid triangle, he pricked his finger slightly. Small pustules were noticed on the fingers on the third and fifth days, and on the seventh day he took to bed with pulse 120 and temperature 104°, followed by delirium. A purulent collection in the wrist joint was evacuated one month after infection. The left knee also became swollen, and the axillary glands were painful and tumid, but no further suppuration occurred. During his illness, Dr. Mulhane lost eighteen pounds in weight, which, at last accounts, he was trying to make up by a trip to the New Orleans Exposition and free intakes of "crab gumbo" and Bayou Cook oysters.

Analects.

EXTRA-UTERINE PREGNANCY.

A notable feature in the history of gynæcology is the progress which has been made within the last twelvemonth in the scientific and clinical knowledge of extra-uterine pregnancy, and in its surgery and therapeutics. It is chiefly to Professor Freund and Mr. Lawson Tait that we owe the most recent additions to our acquaintance with this important question. A series of papers by the former surgeon, translated by Dr. David Smart, was published in the *Edinburg Medical Journal* in the

course of the autumn of 1883, concluding in the December number of that periodical, so that the matter which they contained was ready and serviceable for the year 1884. From Professor Freund's researches we gather the following important conclusions: Extra-uterine pregnancy occurs more frequently than surgeons and obstetricians were, till more recently, accustomed to believe, and cases often end abortively in the early stages without symptoms. A fertilized ovum may develop from any side within the abdominal or pelvic cavities upon which it may happen, through some abnormal cause, to fall, the allantois having a specific power of developing a placenta upon the structures with which it comes into contact. When the placenta forms upon the serous coat of the intestines, the rapid formation of new vessels in the walls of the gut tends to cause localized enteritis; hence, when extra-uterine pregnancy is suspended, the advent of acute intestinal catarrh and colicky pains will denote, according to Professor Freund, abdominal gestation with attachment of the placenta to intestine. If, in such cases, the embryo should die, it will undergo putrid infection from germs which readily may pass into its tissues from the diseased bowel by means of the thin-walled placental vessels. Freund firmly believes in the possibility of ovarian gestation, and declares that he has had cases of this variety in his own practice. It must be here observed that, even in dissected specimens of alleged ovarian pregnancy, there are sources of fallacy that may prove stumbling blocks to the skeptical. Freund considers that the mortality following early rupture of extra-uterine cysts is not nearly so high as is generally believed. He is of opinion that the storm in most cases quiets itself, and apparently the worst cases recover; he also favors destruction of the fœtus by puncture of the sac, and believes that laparotomy is contraindicated, although he admits that a bold surgeon may be justified in operating. Mr. Tait differs both theoretically and practically from these conclusions; he considers that the risk of rupture of the sac and fatal hemorrhage is very

great in the early stages of extra-uterine pregnancy, and that operation is a duty when rupture is diagnosed. In the course of this year, we published a contribution wherein that surgeon described five cases of extra-uterine pregnancy operated upon, at the time of the rupture, by the author; in the four that recovered, the tube and its sac were removed. It cannot be denied that the above named contribution is a most remarkable record of surgical boldness and dexterity. In the latter stages of extra-uterine gestation, if the fœtus has died and peritonitis set in, Professor Freund is in favor of treating the symptoms, and then operating as in circumscribed exudation, that is, he would open, evacuate, and drain. If the child be living, or if it be dead, and symptoms of general infection set in, he is in favor of laparotomy, In this operation, he particularly advocates the shutting off of the peritoneum from the cavity of the gestation-sac; the careful emptying of the sac, disturbance of the placenta being carefully avoided; and lastly, he lays stress on the necessity of thorough disinfection of the interior of the sac, with the membranes and placenta that are left behind.

In a paper on the pathology and treatment of extra-uterine pregnancy, read in the Section of Obstetric Medicine at the Belfast meeting of the Association, Mr. Tait enunciated opinions still further at variance with those of Professor Freund. He strenuously denied the possibility of ovarian, interstitial, or true, that is primarily abdominal pregnancy. He maintained Ritchie's theory, that the uterus is the seat of fertilization of ova, and added that tubal pregnancy, the only primary form of extra-uterine pregnancy in which he believed, arose from some morbid condition of the Fallopian tube, which allowed spermatozoa to enter them, contrary to rule. In tubal pregnancy, Mr. Tait pointed out, the chances were that the placenta would lie on the inner wall of the sac, where it pointed upward, forward, or backward into the cavity of the peritoneum. Should rupture occur, there was little chance that fatal hemorrhage could be averted; but, should the bleeding cease, the ovum might

develope in the abdomen, though he doubted that recovery from the hemorrhage ever took place. If, however, the placenta should lie in that part of the sac which presented downward, in the direction of a broad ligament, then, when rupture occurred, the blood would meet with great resistance between the folds of that ligament, so that the patient might recover, and the fœtus might escape into the folds and develop there.—*Am. Journ. Obst.*

MEDICAL STUDY IN PARIS.

There are over twenty hospitals in which every morning you can enter without fee of any kind, and follow the doctor from bed to bed; and see the patients, examine them, and hear his treatment. This from 8 to 10 A. M. Then at 10 you may attend a clinic, either medical or surgical, and see the best professors perform operations. You may then go into the consulting-rooms and see the treatment given to those poor people who attend them; all this without fees. This will take all the morning. Then in the afternoon you may go to the Medical School and attend all the lectures without any charge. All are welcome who choose to enter. Should you wish to attend any of the practical laboratories of chemistry, physics, pathological anatomy, etc., or dissections, the fee is eight dollars for the year. The new dissection-rooms in Paris consist of eight large buildings that have just been built and opened this winter. They have been built of white stone, are very lofty, and "material" is plenty, some two hundred cadavers on the tables all the time. This course is from 12 noon to 4 P. M., a lecture being given from 12 to 1, or 1 to 2, in each building, by one of the eight "Prosectors." Eight dollars, or forty francs, will admit any doctor to all this. In regard to obstetrics, there is at least *one birth daily* at the Faculty's "*Maison d' Accouchement,*" at which you may "assist" gratis. This also occurs in three of the hospitals. There are quite a number of outside lessons (private), given by the younger

professors for about twenty to thirty dollars a course. A knowledge of French is of great importance to take advantage properly of all that is given away; but at the same time one who only wants to see and make his own diagnosis can visit a few hundred different kinds of "*malades*" every day and see the operations done without any charge. This is spoiled a little by the fact that living is dear in Paris. Even in the "Latin Quarter" you will not be able to live, and poorly at that, under ten to fifteen dollars a week. The lowest board per month is forty dollars.

The actual number of students entered on the books at the medical schools here is four thousand, of whom five hundred and thirty-eight are foreigners, mostly Russians, Poles, Roumanians, and Serbs, and a few Spaniards and South Americans; only two or three English and American (United States). The number of women admitted this year is seventy-eight, of whom only thirteen are French, the rest mostly Russians and Poles, one American. No difference is made between the male and female students. You will see two women and three men often assigned to dissect one male or female subject, just as it happens. One can also see a woman do a post-mortem on a male subject. The women-students are assigned to and visit the male wards, and "assist" at all the operations, including catheterization.—Dr. Linn in *Phil. Med. Times.*

THE THERMO-CAUTERY IN THE TREATMENT OF ANAL FISTULE.

Dr. E. Farcy recommends the thermo-cautery in the treatment of fistule in ano, and draws the following conclusions as to its advantages:

1.—The operation is rapidly performed, and several fistulous tracts may be operated on at the same time.

2.—Chloroform is unnecessary, and there is no danger

of primary or secondary hemorrhage, as by other methods.

3.—By this method the vitality of the tissues is excited, and there is only moderate suppuration. The wound is protected from the direct influence of the air before suppuration sets in.

4.—There is no fever, no erysipelas, no phlegmon or purulent infection, no relapse, and the cicatrix is linear. It is, therefore, the best method for operating in these cases.—*N. Y. Med. Times.*

THE EXTERNAL APPEARANCES OF PISTOL-SHOT WOUNDS.

Dr. D. B. N. Fish publishes a very interesting and useful article on this subject in the *Boston Medical and Surgical Journal*, October 2, 1884, which he thus summarizes;

The *distance* at which a pistol-shot has been fired may be estimated by the following general rules:

1. From a great distance the entrance wound will usually be large and irregular; there will be absence of any great lividity of its edges, and absence of the marks of powder. The wound of exit, if one is present will usually be larger than the wound of entrance. At any distance the edges of wounds of entrance will usually be inverted, those of exit everted.

2. From a short distance the entrance and exit wounds will generally be nearly equal in size; the edges of the former will be blackened, and powder grains will be imbedded in the skin, but there will be absence of the scorching and brandings of powder.

3. Close to the body the entrance wound will generally be larger than the exit. There will often be, in addition to the tattooing of the skin by unburned grains of powder, a mark or *brand* made by the flame of the gases and of the burning powder, by the soot of the partly burned

powder, and by the residue or ash of the wholly burned powder. As a rule, this *brand*, which may consist of a burning alone of the hair, the skin, or the clothing, or of a burning or blackening of the skin or clothing, will appear at one side of the bullet hole.

The *direction* of a shot will be shown in part by the trajectory of the ball—a subject of which this paper does not treat—and by the location of the wound of entrance. The character of the opening, whether rounded or oval, may give some indication of the angle at which the weapon has been held.

The position of the weapon (and whenever this term is used I wish to be understood to mean not its angle to or distance from the body, but the manner or position in which it is held with its hammer and sight above the barrel, as in the usual position for firing, or with the hammer and sight below the barrel, as when the weapon is turned upside down, or in any position of the barrel and sight relative to the barrel of the weapon) is to be determined by the following rule: When the *brand* appears upon the hair, the skin, or the clothing at one side of the bullet hole, hold the weapon with its muzzle to the bullet hole so that the line of its hammer and sight will meet a line drawn from the centre of the bullet hole through the centre of the *brand*, and it will show the exact position of the weapon when fired.

This rule is deduced from the newly-discovered fact that, owing to the recoil of the muzzle of the weapon in the direction of its sight, this brand, when it appears at one side of the bullet hole, will appear upon that side which corresponds to the side of the hammer and sight in their positions relative to the bore or barrel of the weapon. That is, if the weapon is held upside down the *brand* will appear below the bullet hole.

Accidental wounds are generally near wounds. When inflicted from a distance they cannot be easily distinguished from homicidal wounds. In shots fired near by, when a person is known to have been shot while standing, an unnatural position of the weapon, as shown by the

location of the *brand*, will tend to corroborate a claim of accidental shooting.

So, if one is known to have shot himself, an unnatural position of the weapon will show that the wound was probably accidental. The location of the wound and the course taken by the ball may also characterize the wound as accidental.

Homicidal wounds inflicted within the suicide limits have heretofore been distinguished from suicidal wounds alone by the location of the wound and by the uncertain evidence presented by the trajectory of the ball. When the location of the wound has been such that a person might easily have inflicted it upon himself, there have been no means of determining from its character whether it was homicidal or suicidal. To aid in distinguishing between such wounds I offer the following rule: When the location of the *brand*, relative to the bullet hole, shows that the weapon has been held in a position of its hammer and sight impossible or improbable for a suicide, it is probable that a murder has been committed. Certain relative locations of this *brand* may also indicate that the victim has been shot while in a reclining position.

Multiple wounds are usually homicidal, but may be either accidental or suicidal.

Shots fired beyond the usual suicide limit are probably homicidal.

Suicidal wounds. It is said that the suicide rarely holds the muzzle of his pistol at more than eight inches from the body. Suicides generally fire at the sides or front of the head, next at the heart; they sometimes fire at the back of the head.

The distance from the body at which the weapon must be held to show the *brand* plainly is probably very nearly as follows: for small pistols and revolvers, not over four to six inches; for large weapons of this class, not over twelve to fourteen inches.—*N. Y. Med. Times.*

ROHE'S Text-Book of Hygiene.—See Advertisement.

THE USE OF IODOFORM.

"The reign of carbolic acid in Germany is over, and that of iodoform has begun," is the remark of a recent writer upon antiseptics, and in this sentence he expresses quite graphically the strong hold which this substance has obtained on the Continent. Scarcely less varied than the uses of cocaine are the cases in which iodoform has been recommended. We find it landed as almost a specific in phthisis, and even hear of its successful administration in diabetes.

As a surgical dressing it seems to have superseded nearly every other—at least in certain clinics. One writer speaks highly of the treatment of cold abscesses by injections of iodoform dissolved in glycerin, and another thinks compound fractures are best treated by sealing them up with the dry powder. Koenig is an enthusiastic advocate of the use of this substance in operations upon the joints, and introduces from seventy-five to a hundred and fifty grains into a cavity, apparently without inducing unpleasant general symptoms.

Iodoform suppositories in uterine surgery, and pencils of iodoform for fistulous tracts, have been deservedly recommended. Ligatures saturated with the drug have been employed with success.

Although iodoform has not been used in New York as widely and systematically as in Germany, its merits have been clearly recognized, especially in gynæcology, where its true sphere seems to lie. There are drawbacks with this as with almost every other antiseptic, but on the whole we may concede that the enthusiasm of foreign surgeons is not ill-founded.—*N. Y. Med. Journal.*

Regarding acute dysentery, Prof. DaCosta says, the best treatment is ipecac., not to exceed gr. xx every two or three hours, guarded with opium, and he has very remarkable results from this plan. It is especially good in puerperal dysentery, as Prof. Bartholow has pointed

out. The opium plan (gr. ss every two hours) is good. Next is Rochelle salts, one ounce in divided doses in the first twenty-four hours, and less thereafter. This does not preclude the simultaneous use of small doses of opium. Both the ipecac. and the saline purgative plans should be abandoned in two days if no change in the condition of the patient is seen; they are rapid or valueless in their action. Next comes bismuth subnitrate, gr. x-xx every two or three hours. The use of ice water injections three or four times a day was originated by him some years ago; they are very valuable. Sinapisms are useless and blisters harmful.

Editorial.

CIVIL SERVICE REFORM AND THE MARINE HOSPITAL SERVICE.

In a recent issue of the Washington "Star," it is stated that efforts are being made to secure the office of Supervising Surgeon-General of the Marine Hospital Service for Dr. A. N. Bell, of New York.

We hope President Cleveland's administration, with which we are in thorough sympathy, will not make such an unwise appointment.

The present head of the Marine Hospital Service has administered the duties of his position with energy and zeal, and although the extra duties imposed upon the service by Congress and the President, could, in our opinion, have been more efficiently and satisfactorily performed by the National Board of Health, we are not disposed to censure Surgeon-General Hamilton for carrying out the instructions of his official superiors.

We think the Medical Services of the government should be especially secure against partisan inroads, and we trust that Dr. Hamilton will not be removed to make

a place for an outsider. Such action would completely set aside the principles of civil service reform and violate the pledges upon which Mr. Cleveland was elected to the presidency.

Even if it is regarded by the treasury department as advisable to remove Dr. Hamilton, we think a far better selection could be made among the officers of the service than that above named.

The late Surgeon-General Woodworth, under a republican administration, took the Marine Hospital Service out of politics. It would be a serious blunder to restore the spoils system under a democratic reform government.

We invite the attention of Secretary Manning to these considerations.

THE COLLEGE OF PHYSICIANS AND SURGEONS.

The thirteenth annual commencement of this college was held on March 13. The graduating class numbered 155, the largest in the history of the college. The prize men of the class are J. W. Coughlin, Mass., F. C. Bressler, Pa., J. C. Hurst, Va., W. S. Gardner, O., A. L. Gage, Md., A. D. Marks, O., M. S. Falls, D. C., T. B. Perry, Ga., W. T. McCoy, Ind., J. R. Flannigan, N. Y., and A. L. Hutto, S. C.

The address was delivered by Rev. J. S. Foley, of Baltimore.

At the Alumni meeting held on the twelfth the alumni prize of one hundred dollars was awarded to Dr. J. S. Miller, class of 1883, for an essay on *The Schizomycetes*. The essay will be published in the CHRONICLE. The following were elected officers of the Alumni Association for the ensuing year:

President, Dr. David Streett, - - - Class of 1878
Vice President, Dr. Geo. Thomas, - - " 1882
Secretary, Dr. A. L. Gage, - - - - " 1885
Treasurer, Professor Opie.

The committee on prize essays for the coming year consists of Professors Rohé, Clagett and Bevan.

THE TRANSMISSIBILITY OF TUBERCULOSIS BY SEXUAL INTERCOURSE.

The absurd conclusions reached by some of the partisans of the infectious nature of tuberculosis are well illustrated in the following propositions contained in a paper lately read by M. Fernet, (*Progres Med.—Louisville Med. News:*) "1. Genital tuberculosis can be the result of direct contagion during coitus. 2. That blennorrhœas ought to be held as suspicious, which do not succeed true blennorrhagia and their tuberculous nature should be made plain or negatived by a careful search for the bacillus. 3. Coitus between spouses, one of whom is affected with tuberculosis, should be considered dangerous. 4. Genital tuberculosis can be the source of a secondary general infection, and so should be treated as energetically as possible by the aid of various medico-chirurgical means."

Current Literature.

Fourth Annual Report of the Secretary of the State Board of Health of West Virginia.

In this brief report, the last from the pen of Dr. Reeves, who has been compelled by ill health to resign the secretaryship, the good work of the West Virginia Board is recorded. Besides the general report, the brochure contains an abstract of a valuable paper on polluted drinking water, read by the secretary at the last meeting of the American Public Health Association. The facts in the case of F. M. Dent, convicted of practising medicine in violation of the State law, together with the full text of the opinion of the Court of Appeals, sustaining the constitutionality of the medical practice law, are also given in the volume.

Transactions of the New Hampshire Medical Society for 1884.

This neatly printed volume gives evidence of creditable work on the part of tne profession of the Granite State.

The Diagnosis and Treatment of Chronic Nasal Catarrh. By G. M. Lefferts, A.M., M.D. St. Louis: Lambert & Co., 1884.

This little volume contains three clinical lectures on nasal catarrh. The author is a well-known specialist, and the publishers are the manufacturers of a popular antiseptic, freely referred to in the book. We suppose the book can be obtained on application to the publishers.

Sixth Annual Report of the Illinois State Board of Health for 1884.

This report contains the proceedings of the Board for 1883, a conspectus of medical colleges in America, (revised to December, 1884,) and the official register of physicians and midwives authorized to practice in the State of Illinois.

Pamphlets.

Biennial Message of Gov. J. B. Jackson to the Legislature of West Virginia.——Historical and Critical Notes on the Delivery of the Placenta, by J. C. Reeve, M.D. Reprint from Trans. of Ohio State Medical Society for 1884.——Unilocular Ovarian Cyst, weighing 95 pounds, successfully removed. By Geo. E. Ranney, M.D. Reprinted from Journ. Am. Med. Asso., Nov. 29, 1884.——Provision for Idiotic and Feeble-minded Children. By Isaac N. Kerlin, M.D.——The Obligation of Society to Idiotic and Feeble-minded Children, by Hon. H. M. Greene.——Cases of Arsenical Dermatitis, by J. C. White, M. D. Reprinted from Boston Med. and Surg. Journ., Nov. 6, 1884.——Psoriasis—Verruca—Epithelioma; a Sequence. By J. C. White, M.D. Reprint from Am. Journ. Med. Sci., Jan., 1885.——A Case of Unilateral Chromidrosis. By J. C. White, M.D. Reprint from Journ. Cut. and Ven. Dis., 1884.——Address in Medicine.

By W. H. Daly, M. D. Reprint from Trans. Penna. State Med. Society, 1884.——Extensive Burn, Involving the Cavity of the Knee-Joint. By W. H. Daly, M. D. Reprint from Brit. Med. Journal, Dec. 13, 1884.——A Discussion of Some Questions Relating to Tonsillotomy. By W. H. Daly, M.D. Reprint from Med. Mecord, Feb. 1883.——The Sanitary Condition of St. Louis, with special reference to Asiatic Cholera. By J. M. Leete, M.D., and Robert Moore, C.E. Printed by the St. Louis Commercial Club.——Annual Report of Western Penna. Hospital for the Insane for 1884.

Flotsam.

THE Sanitary Council of the Mississippi Valley met March 10th in New Orleans.

FORCIBLE dilatation of the prepuce is recommended as a substitute for circumcision.

CHRONIC asthma can be relieved by one-twelfth of a grain of apomorphine thrice daily.

DEBOVE has successfully treated sciatica by ether spray along the course of the nerve.

THE cæcum has been removed by an English surgeon for epithelioma. The patient is dead.

THE Spring Session of the College of Physicians and Surgeons began March 16, Lectures will be delivered from 11 to 2 o'clock daily.

BABES has experimentally demonstrated that the comma bacillus will not grow in beer or wine. Why seek further for a preventive of cholera?

DR. LOUIS ELSBERG, one of the most prominent laryngologists in the country, died in New York on February 19th at the comparatively early age of forty-nine.

A WRITER in the *Lancet* says honey is the best vehicle for the administration of quinine to children. The dose is to be placed in the centre of a small spoonful of honey.

THE third edition of Dr. Cathell's excellent book, "The Physician Himself," is exhausted. A new edition, greatly enlarged, is now in press and will soon be issued.

THE "*Sanitary News*," the ablest and newsiest journal devoted to sanitary matters in the country, has become a weekly. We congratulate our contemporary upon this evidence of prosperity.

IN the *N. Y. Med. Journ.* for February 21, Dr. E. E. Montgomery reports a case of cervical pregnancy. The condition is an extremely rare one, and is not mentioned in any of the obstetrical text-books with the exception of that of Lusk.

DR. WM. BRAITHWAITE, who founded *Braithwaite's Retrospect* nearly half a century ago, recently died at his home in Leeds, England, in his seventy-eighth year. The *Retrospect* is still published, and makes its semi-annual visit to thousands of busy doctors in all English speaking countries.

THE committee of arrangements for the next meeting of the American Public Health Association in Washington, next December, has been organised by the appointment of Dr. Smith Townshend, Health Officer of the District of Columbia, as Chairman, and Mr. J. C. McGinn as Secretary. Medical Director A. L. Gihon, of the navy, is chairman of the reception committee.

BABYHOOD is the name of a monthly magazine recently established in New York. Its editors are Dr. Leroy Milton Yale and Marion Harland. It is intended as a medium to disseminate correct hygienic and other knowledge bearing upon the care and training of infants and young children. It seems to us to admirably fulfil its mission. The subscription price is $1.50 per year.

A MEDICAL gentleman who is always well posted was asked how and where a well known lady physician procured so many patients, replied that she was somewhat of a specialist, having a clientéle of young brides who had confidence in her by reason of her age and experience, and who, consulting her soon after the pleasures

and pains of the nuptial couch, were regarded with a wise and impressive gaze over spectacles, and prescribed cold cream and continence. [A nice alliterative prescription.]

We have just received from the Illustrated Medical Journal Co. of Detroit, Michigan, several sets of their perforated, adhesive medical jonrnal labels. The list includes besides the journals of the United States that are devoted to Medicine, Pharmacy and Hygiene, those of the Provinces of Canada as well. Four complete sets will be mailed postpaid for fifty cents on addressing the publishers above named. They are just what every physician needs for addressing his reprints for journal notice, and medical colleges for addressing their announcements for a similar purpose.

The many friends of Dr. James E. Reeves will regret to learn that his health has been so much impaired by overwork in connexion with his position as secretary of the West Virginia State Board of Health, that he has found it advisable to resign that position. Dr. Reeves' services to the profession and the people of his State, and to the cause of sanitary reform and medical education, have given him a reputation of which any man might well be proud. Gov. Jackson, in accepting the resignation of Dr. Reeves, expresses the hope that his health may be speedily restored, in which cordial wish we fervently join.

In Germany the papers report a recent case where a physician used the old methods of treating wounds, instead of the modern antiseptic dressings, and the patient died under circumstances making it probable that if a different treatment had been adopted his life would have been saved. The physician was sued for malpractice, and convicted, the court holding that "every practitioner should keep himself informed on the accomplished progress of science, and have an exact knowledge of modern systems of treatment. If these had been employed, the patient's life might have been saved; hence the liability for negligence."

—THE—

MEDICAL CHRONICLE.

BALTIMORE, APRIL, 1885.

Original Articles.

ARTICLE I.

THREE CASES OF STRICTURE OF THE RECTUM, WITH REMARKS.

By S. T. EARLE, M.D., Baltimore.

The specimens were kindly furnished me from the Pathological Museum of Johns Hopkins University.

Case 1 is taken from a woman aged 60 years, who died at Bay View, of pneumonia, combined with morbus Brightii. There was also some slight degree of cirrhosis hepatis. On attempting to remove the rectum, it was found to be so intimately adherent to the sacrum, that it could only be stripped from this by close dissection with the knife. On opening the rectum posteriorly it was found to be imbeded in and surrounded by a mass of dense, firm, fibrous tissue. At one point posteriorly, where it was most intimately adherent, there was a mass of tissue, partly fatty and partly densely fibrous, as large as a hen's egg. The rectum was thickened and contracted from the anus upward for a distance of about six inches. The bowel throughout was not of the same calibre. At the narrowest point it was so contracted that a passage not larger than the end of the little finger was left. The rectum seemed to be almost entirely bared of mucous membrane, but small patches of it being found here and there. There was no sharp line separating the muscular tissue of the bowel from the fibrous tissue spoken of. Immediately behind the bowel there was a large sinus,

which communicated freely with the bowel above and below. There were numerous other sinuses, some of which communicated with the rectum, above and below, some with the vagina and others with the perineum. The mucous membrane was also bridged over in numerous places by the dense, firm, fibrous tissue spoken of. Microscopic examination showed the case to be undoubtedly one of scirrhous carcinoma. The tissue between the alveoli of epithelial cells seemed to be almost entirely composed of non-striated muscular fibres. This was not only the case in the walls of the rectum, but even in places more remote. The supposed bands of fibrous tissue which ran off from the rectum and into the fatty mass were shown to be almost entirely muscular in character. The tissue composing the bridges which extended over the mucous membrane was also carcinomatous in character. No metastases were found anywhere in the body. The woman was white, a native of Virginia, and had no lesion indicative of syphilis except a cicatrix over the right tonsil.

Case No. 2. This specimen was taken from a woman aet. 37 years, with well-marked syphilitic history. Here a large mass of cicatricial tissue, surrounded by dense fibrous tissue, is seated in the bowel about four inches from the anus. There is a large and well marked fistulous passage from the rectum into the lower portion of the vagina. This case appears to be simply one of cicatrisation, due to an unknown cause.

Case No. 3. Stricture of the rectum occurring in a woman aet. 27 years. In this case the stricture commences at a point about one and a-half inches above the anus, and extends up the bowel for a distance of five inches. The stricture is well-marked, the calibre of the bowel being extremely narrow for the entire length of the constriction. At several points along the constriction the cicatrisation is extremely well marked. The cause of the stricture in this case is also unknown, but it most probably was the result of dysenteric ulcerations, because in the descending colon and other portions of the large

intestines, cicatrices, evidently due to the healing of dysenteric ulcerations, were found.

Up to the nineteenth century all rectal strictures were thought to be due to malignant growths, and were referred to a common etiological origin; subsequently they were subdivided into two classes, spasmodic and organic. Organic strictures were then further subdivided into simple, specific, malignant and congenital. The existence of pure and simple spasmodic stricture of the rectum was strenuously held for a long time, especially by English surgeons. Modern authors generally do not admit of its existence, except in certain rare forms of hysteria and certain cerebro-spinal lesions; and even Allingham, the leading English authority of the present day on rectal diseases, only admits of its coexistence with organic stricture. He has done more, says Kelsey, "by substantiating this admission with a clinical fact than has ever been done before, and really this is the only case that proves anything with regard to the matter." Allingham cites a case seen by him at St. Mark's Hospital, where a stricture, which would not admit the end of his little finger, readily admitted two fingers when the patient was placed under the influence of chloroform. While such is the array of evidence against spasmodic stricture of the rectum, spasmodic stricture of the external sphincter is not an uncommon occurrence. Organic strictures originate from intrinsic or extrinsic causes, the former originating within the bowel itself, the latter in the surrounding tissue. All these causes operate however in determining sooner or later inflammatory changes, which lead to the production of the stricture. Some of the most frequent intrinsic causes of stricture of the rectum are continued local irritation of the mucous membrane from the presence of hardened and acrid fecal matters, habitual injections of irritating substances, drastic cathartics, and the presence of foreign bodies which may be swallowed or introduced through the anus; in a word, anything that is likely to set up proctitis. According to Rokitansky, proctitis may lead to stricture in the follow-

ing manner: Proctitis leads here as in the large intestine generally to polypoid hypertrophy of the mucous membrane or to suppuration, resulting either in circumscribed, sometimes circular, ulcers, or in an erosion of the mucous membrane for a considerable area. This erosion lays bare a thick cicatricial submucous connective tissue, which passes between the bundles of the muscular coat, and causes the rectum to degenerate into a hard, stiff, narrow tube, enclosed in a firm, connective and fatty tissue.

Among the extrinsic causes that may operate in lessening the calibre of the rectum are carcinoma of the uterus, enlarged ovaries, hematocele, ischio-rectal abscesses, and especially the long continued pressure of the child's head during labor; nine of the twenty-eight cases of Curling followed labor. Venereal diseases are certainly, next to malignant affections, the most common causes of rectal stricture. Godebert, in addition to his own twelve cases of stricture, collected fifty-four from other sources, making sixty-six in all; of these forty-seven had been preceded by syphilis. In speaking of strictures arising from syphilitic causes we will leave out of consideration true chancre and the mucous patch, for the reason that their influence in the production of stricture is rather a matter of conjecture than proof. The chancroid, syphilitic ulcerations appearing in the later forms of syphilis and gummata seated below the mucous coat may all lead to the formation of stricture; possibly syphilitic ulcerations play the most prominent part among these causes. Tuberculous ulcerations of the rectum are rarely followed by stricture, for the reason that these ulcers rarely cicatrise; the same may be said of the lupoid form of ulceration, known as esthioméne. The malignant growths to which the rectum is subject and which in most cases produce stricture, are nearly always epithelial in character. Most of the carcinomas begin as simple adenomas, which in most cases soon substitute an atypical growth of epithelium for the typical. Even where the tumor remains an adenoma it must here be considered malignant almost

to the same degree as the carcinoma. Carcinoma arising from cutaneous epithelium, and characterised by the concentric masses of epithelial cells, is found only in the lower portion of the rectum, near the anus. Elsewhere the carcinoma belongs to the glandular type, arising most probably from the glands of Lieberkuhn, and may be either of the scirrhous, colloid or encephaloid variety. There has been only one case of osteo-sarcoma, (and that most likely was an extension of the disease from the sacrum,) reported, and that was by M. Collambel of Lambeth.

Congenital stricture may result either from imperfect development, which may leave the bowel so small as scarcely to allow of the passage of the meconium, or from excessive development of the normal folds of the mucous membrane.

Pathological Anatomy. Opportunities for noticing the pathological changes which take place in the early stages of this disease are rare for obvious reasons. The changes observed vary with the stage of the disease, its locality and origin. In all cases of stricture, with perhaps the exception of those due to congenital causes, the disease is the result of inflammatory changes, induced in the mucous and connective tissue layers of the rectum. It is especially when the inflammatory changes involve the connective tissue that stricture is produced. This is shown from the fact that the ordinary cases of dysentery generally have no effect in this regard, but in the severe cases, where the ulcerative process is deep and extensive, stricture follows very often, and would be more frequently met with but for the fact that such cases seldom recover. Following these changes in the mucous and connective tissue layers, hypertrophy of the muscular layer occurs. The mechanism of the formation of rectal stricture varies. In certain cases it is the result of traction by newly-formed tissue; in some by cicatricial tissue, as shown in the second case; this contracts and narrows the calibre of the bowel. While in others we have such an enormously increased growth of the connective tissue layer,

and even new formations in this, so that the passage of the bowel is actually obstructed. Abscesses are also likely to form in the neighborhood of a stricture; from these abscesses sinuses run in various directions, opening into the vagina, perineum, etc.; hence the existence of sinuses should always lead the surgeon to look for stricture. While it is true that stricture is nearly always preceded by ulceration, it is also almost invariably accompanied by it. Such ulceration is not necessarily a continuation of the primary ulcer, but is the result of the condition induced by the stricture, such as the excessive dilatation of the bowel above the stricture, and the continuous presence of hardened fecal matters, and of changes which take place in the mucous membrane.

Diagnosis. One of the most important of all points to which I would call your attention is the diagnosis, from the fact that it is just here that mistakes are so frequently made. Especially was this the case formerly, when spasmodic stricture of the rectum was acknowledged. Cases of supposed stricture were treated by dilatation for months, and under more skillful hands the rectum was found to present no abnormal condition. The causes of these frequent errors are obvious when we consider the curves made by the rectum, almost doubling upon itself like the letter S, the prominent sacrum and the folds of mucous membrane which frequently hang loosely in crescentic folds in the calibre of the rectum, and lastly, the means generally used in making the diagnosis—namely, the bougie. The two first of these causes leading to error in diagnosis should be carefully borne in mind, while the last is best obviated by substituting the finger for the use of the bougie, and by this method mistakes are inexcusable. It not only serves us best when the stricture is low down in the rectum, but even when up near the sigmoid flexure, it is still the most efficient means at our command, and can be readily used, even in these cases; provided the surgeon's hand does not measure more than seven and a-half inches in circumference, the sphincter ani can be dilated sufficiently to admit the whole hand

into the rectum, when the finger would reach the point of constriction. It will be inferred from what I have said that the best means at our command for making a diagnosis is the finger, and so it is, if carefully used. By it you can readily ascertain the point of obstruction, its extent, and the amount of surrounding induration; and more than this, it has the decided advantage over the bougie of being free from the danger of rupturing the bowel when carefully used. This accident is readily possible, on account of the very thin condition of the bowel just above the stricture, caused by the ulceration that so generally accompanies it. In addition to the use of the finger per rectum, the vaginal touch in women affords the next most ready means of diagnosis, and should never be omitted.

The symptoms which point to and accompany stricture, and which should lead to the institution of the above more positive means of diagnosis, are obstruction, which at first shows itself in alternate attacks of constipation and diarrhœa, the operations being accompanied or followed by a discharge of mucous and blood, attended with tenesmus and a discharge of wind.

The ribbon-shaped passages, thought to be so characteristic, are indeed rarely present, their existence depending upon the location of the stricture. If this is so low down that the straining produces prolapsus, bringing the constricted portion within or below the margin of the anus, thus making the stricture the last orifice through which the feces pass, then we have it. But if the stricture occurs high up in the rectum, and the feces are thus allowed room to collect below before being discharged, we then have the normal size and shaped evacuations, even although the stricture may be a very close one. The malignant stricture is accompanied with an ichorous discharge of characteristic odor, and the health is more generally and quickly affected.

Treatment. There are various means by which the comfort of these patients may be greatly increased without resorting to operative procedures. The most effectual

of these are a careful regulation of the diet, the occasional administration of laxatives and rest. The diet should be mostly fluid, principally milk; a certain amount of farinaceous food may also be allowed. The bowels should be moved daily without straining, and this is best accomplished by administering such mild laxatives as Rochelle salts, seidlitz powders, &c. Purgatives should not be used, not only because they are likely to produce straining, thus increasing the tendency to congestion, but are very likely to cause rupture of the bowel, which has been already weakened by ulceration. Cod liver oil serves a good purpose in these cases, both as a means of support and for its laxative effects. The diarrhœa which sometimes alternates with the constipation is harder to control, as it is dependent upon the ulceration present. It is best treated by opium suppositories. The surgical means for affording relief are either dilatation, division, excision or colotomy. Dilatation may be either gradual or rapid. The former, when used in conjunction with the palliative means already mentioned, may prolong the patient's life and increase his comfort, but is only slightly curative by stimulating absorption of the effused material. The means generally used to accomplish this is the bougie, which should be used with great care once, or, at the most, twice a week; never with force, and only allowed to remain in a short time at each application. Rapid dilatation is attended with so many dangers, such as hemorrhage, laceration, rupture of the bowel, peritonitis and abscess; and the benefits derived from it are so transient, (the advantages thus gained having to be kept up by the frequent use of bougies,) that it is but seldom resorted to. Division or proctotomy may be either internal or external. Internal proctotomy is further subdivided into the complete or partial. The latter consists in merely nicking the stricture at several points with a probe-pointed bistoury, which should be directed by the index finger. After this is done the stricture may then be dilated with the finger, or some other forcible means may be used. This proceeding in some cases has served a

good purpose. In complete internal proctotomy the stricture is completely divided in the median line, either anteriorly or posteriorly, down to its base, but this division is not continued any further. This operation, while not nearly so formidable in appearance as the external variety, presently to be described, does not result nearly so favorably, owing most likely to the fact of the discharges being retained by the undivided sphincter. Whatever be the cause, this operation is very likely to be followed by pelvic cellulitis or some such untoward accident. External proctotomy consists in the division of the stricture and all the soft parts below in the median line, including the sphincter ani, and extending to the tip of the coccyx. This operation is accredited to Nélaton, and more recently advocated by Verneuil and others. It may be performed either with the knife, galvano-cautery or écraseur. If done with the knife, a probe pointed bistoury with stout back should be used, guided in its introduction by the index finger through the stricture, which should first be divided down to its base, when the incision must be extended down through the soft parts to the point of the coccyx. Thus done it is likely to be followed by a profuse hemorrhage, which however is easily controlled by packing with picked lint. To avoid this accident the galvano-cautery and écraseur have been recommended as substitutes for the knife. The subsequent treatment consists in removing part of the lint, which it was necessary to pack very tightly to control the hemorrhage, on the day following the operation, in order to relieve the pain occasioned by its presence. The balance should be removed after suppuration has set in. Cleanliness, rest in the recumbent posture and a milk diet constitute the remaining points of importance in the after treatment. The principal advantages of this operation are that it furnishes a thorough system of drainage for the discharges, and destroys the action of the sphincters. The effect of this latter is to remove one of the most fruitful sources of annoyance and suffering to the patient. This was shown in a case of Verneuil's,

where there was a stricture high up, but under a mistaken diagnosis of spasmodic stricture of the anus, the sphincter was divided with the galvano-cautery, while the real cause of the trouble remained untouched, yet there was entire relief from suffering. Another decided advantage claimed for this operation is that it is a good substitute for that repulsive operation, colotomy, when the stricture is within safe reach of the knife from the anus. Too much, however, must not be expected of the operation. While in favorable cases it may effect a practical cure, in those that have continued for some time and are attended with extensive ulceration, neither this, nor anything else will effect a cure; yet even in these cases proctotomy may be relied upon to relieve pain and prevent fecal obstruction. Nor must we overlook the fact that the incision is but the first step in the case, and that we still have a diseased bowel to treat.

Excision is generally only applied to the relief of cancerous strictures, and although an operation of considerable magnitude, is often followed by fair results.

Colotomy is the last resort of surgery in dealing with these affections, but since the introduction of external proctotomy there is but one class of cases in which it is likely to be necessary; they are those in which the stricture is too high to be safely reached with the knife from the anus, hence its performance is limited to a narrow range of cases.

ARTICLE II.

A CASE OF FRACTURED SKULL FOLLOWED BY COMA.—RELIEVED BY TREPHINING.

By W. FRANK HINES, M. D, Chestertown, Md.

I propose to confine myself entirely to facts in presenting this case, leaving all theory and speculation to others. The whole case from beginning to end was one of much more than ordinary interest to me, and my only excuse for publishing this account is that perhaps it may prove of interest to some one else.

On the morning of Saturday, October 25, 1884, I was called in great haste to see Theodore I., aged 15 years, who had been kicked on the head by a horse. He had been watering the horse; after drinking, as the horse turned and started towards the stable, the boy caught him by the tail which frightened him, and resulted in the boy being kicked. I reached the patient about two and a half hours after the receipt of injury, and found him in a complete state of coma. Upon examination, I found two wounds of the scalp over the left parietal bone, converging to nearly a point, there being scarcely more than a quarter of an inch of sound tissue at the angle. I was told he had bled freely, but saw no hemorrhage myself, the wounds being pouched with clots. After a thorough cleansing and shaving of the soft parts, I introduced my finger into the upper wound, but could feel nothing like a fracture, though the soft parts were very much contused and freely admitted my finger. I then carefully examined with a probe and still finding no fracture I closed the wound and turned my attention to the lower cut, which was examined in the same way with almost the same result, and I had expressed the opinion that the ugly symptoms were due more to concussion and shock than to the wound. After ordering medicine and giving general directions, I was about to leave, but before doing so, again introduced my probe between the sutures, and to my astonishment found every evidence of fracture. The sutures were at once removed, and with a bistoury the opening enlarged, revealing a compound comminuted fracture. After telling the family of the gravity of the case, I asked for a consultation.

At 7 P. M. Dr. J. A. Perkins and myself gave him a thorough examination, and agreed there was no other procedure than trephining. His mother begged a postponement till the next morning.

About 11 A. M., in company with and assisted by Drs. Perkins and Price, I proceeded to operate. The condition of the patient was such as to preclude an anesthetic. After bringing the two wounds to a point, the flap was

carefully raised and turned back, exposing a triangular piece or pieces of bone. Together they were fully two inches long, three-quartes of an inch at the base. They had been forced directly backward and inward until beyond the inner surface of the skull by which they were tightly held. Efforts were made to raise, but this failing, the fractured part was seized and pulled downward hoping to relieve in this way, with no success. The trephine was then placed partly over the broken bone, but mostly on the parietal, and a button of bone the size of a nickel removed, when another effort to raise and get the fracture in position was made, but failed, as did another effort to withdraw from above downward. Then a piece of bone was removed from the sound part one and a-half inches long by one-third wide at the base, running to a point, when I was immediately able to raise and withdraw the fractured part, and found, much to my gratification, no destruction of brain tissue, though there were several clots and a great deal of local congestion. This space was carefully cleansed and dried with a velvet sponge and absorbent cotton. After satisfying myself that there was no other fracture, nor any clots remaining, I began the use of hot water to control hemorrhage, which was successfully done after constant sponging for more than a half hour.

The flap was replaced, and held down by eight or ten silver sutures. Over this a pad of lint, soaked in cold water, (carbolised,)—I had as well state that at this time and afterward carbolised water was used. Over the lint was laid a linen cloth of several thicknesses, also soaked with cold, carbolised water. As the patient was quite still, no bandage was used at this dressing.

The time consumed—including the sponging to arrest bleeding—was nearly two hours and a-half. Twice during the operation the patient was thought to be sinking. The first time whiskey, hypodermically, was resorted to with success. The next time an effort was made to use it resulted in bursting the glass cylinder, rendering the instrument useless. After repeated efforts a little whiskey was forced down the throat; meanwhile he was well rubbed with the same.

The nurses were charged particularly to renew the wet cloths every 12 or 15 minutes.

Potas. bromide and morphia were ordered to be given when possible, at intervals of four hours. This and all other necessary orders as to medicine, food and dressings were faithfully carried out.

Dr. Perkins saw him with me again the next (Monday) morning, about 20 hours after the operation. Axillary temperature was slightly above normal, and never rose beyond 100° at any time. Pulse quite rapid and compressible. During the night he raised up in bed, and when asked what he wanted said, "I want the chamber;" passed urine and relapsed into his former stupid condition, though repeated efforts were made to arouse him, without success. This was repeated once Tuesday night, or 48 hours later. On Wednesday morning he could be roused sufficiently to take beef tea and milk toddy from a spoon. Also, when later during the forenoon he complained of a pain in his head, he was made to take the bromide and morphia solution. His bowels had been moved twice in 48 hours by enemas. During Wednesday afternoon consciousness returned and never left. For several days he complained of pain in his head, but very cold cloths would give relief.

This same line of treatment and dressings were continued for over two weeks, when convalescence was fairly established. At this time, iodoform powder, with absorbent cotton, soaked in an ethereal solution of iodoform, then dried, was used. There was never very much suppuration. The sutures were removed as necessary. At this time the patient passed out of my hands.

On February 15, 1885, his father came to my office to show a long, narrow strip of bone, $1\frac{1}{4}$ inches long, $\frac{1}{8}$ inch wide, and about the thickness of Bristol board. A few days before this the young man, while caressing his "soft spot," felt something hard. Upon gentle but firm traction being made, the above spiculum was withdrawn. It had never given any pain, nor did it hurt at all when pulled out. The patient is now enjoying excellent health.

Perhaps if I could have raised the fractured bone and gotten it into anything like apposition, it would have been better to have left it; but under the circumstances I was (and am) of the opinion that death would in all probability have ensued if the bone had been allowed to remain.

ARTICLE III.

DISINFECTANTS.

PRELIMINARY REPORTS OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

II.—*Continued.*

THE HYPOCHLORITES.*

By J. R. DUGGAN, M D, PH.D. Fellow by Courtesy in the Johns Hopkins University.

In my previous work on commercial disinfectants, I found that the specimens of Labarraque's solution of sodium hypochlorite, although containing only a small quantity of this salt, were among the most effective in their action. On looking over the literature of the subject, I found that although this solution and that of the corresponding calcium salt (chloride of lime) were among the first used disinfectants, very little had been done to fix accurately their value. In order to determine this, I prepared standard solutions of sodium and calcium hypochlorites for use in the following experiments. The available chlorine, that is, the chlorine which enters into the constitution of the hypochlorites, was determined in these solutions by its oxidising action on a standard solution of arsenious acid; papers saturated with starch paste and potassium iodide being used to show an excess of the hypochlorite. The well-known method of Dr. Sternberg was used throughout the investigation to determine germicidal value. The following solutions were prepared:

Solution A: Sodium hypochlorite made by passing

*Medical News, February 7th, 1885.

chlorine gas into a solution of sodium hydroxide. Available chlorine=6 per cent.

Solution B: Calcium hypochlorite made by passing chlorine gas into milk of lime. Available chlorine=6 per cent.

Solution C: Calcium hypochlorite made by dissolving 100 grammes of bleaching powder (chloride of lime) in 1 litre of water, and filtering. Available chlorine=2.4 per cent.

Solution D: Potassium hypochlorite made by passing chlorine gas into a solution of potassium hydroxide, and diluting until the available chlorine=1 per cent.

The action of Solution A on spores of *Bacillus anthracis* was tried with the following result: 2 per cent. was effective in 30 minutes, 1 hour, and 2 hours; 1 per cent. failed in 1 hour, effective in 2 hours.

Solution B in 2 per cent, gave similar results. In 1 per cent. it was effective in both 1 and 2 hours.

Solutions A and B were both found to be effective in 5 per cent. and 1 minute's time on the organisms of broken-down beef-tea. One-half per cent. of these solutions failed to destroy in 2 hours organisms in broken-down beef-tea, but 1 per cent. of Solution A was effective in the same time. One of the bulbs from a 1 per cent. solution of Solution B broke down, but the other remained clear. These solutions were also tried in 2 and 3 per cent. for 2 hours and found effective.

Solution C was effective in 3 per cent., but failed in 1 and 2 per cent. in 2 hours.

Solution D was effective in 7 per cent., but failed in 5 and 6 per cent. in 2 hours.

In addition to these we may mention a dilute solution of bleaching powder of unknown manufacture. This contained 0.4 per cent. available chlorine, and was effective in 15 per cent., failed in 10 per cent.; time, 2 hours. The commercial specimens of Labarraque's solution, reported among the commercial disinfectants, showed about the same value in proportion to the available chlorine they contained. These latter experiments were all made

on broken-down beef-tea. That this contained spores as well as organisms, was shown by the fact that tubes inoculated from the solution while boiling developed various bacilli. Of course, spores must have been present to resist this temperature.

While it has been thought well to use a pathogenic organism in some of these experiments, I am convinced, from recent work on the subject, that any agent that will destroy *Bacillus subtilis* will also destroy *B. anthracis*, and probably any other pathogenic organism.

The foregoing experiments show that a solution containing 0.25 of 1 per cent. (1 part to 400) of chlorine as hypochlorite is an effective germicide even when allowed to act for only one or two minutes, while 0.06 of 1 per cent. (6 parts to 10,000) will kill spores of *B. anthracis* and *B. subtilis* in 2 hours. A simple calculation will show that all the solutions used were effective when diluted to about this strength. and failed a little below it. No better evidence could be had of the reliability of the excellent method of Dr. Sternberg for testing agents of this kind. These experiments were all made in duplicate and they show a concordance which I am satisfied can be obtained by no other method with which I am acquainted.

The value of the various commercial preparations, such as Labarraque's solution and bleaching powder (chloride of lime,) of course depends on the amount of available chlorine they contain, since the chlorides and chlorates are of very little value as disinfectants. Bleaching powder usually contains from twenty-five to forty per cent. of available chlorine. For most purposes, a solution containing 1 part of this preparation to 100 of water is strong enough, for this will contain from 0.25 to 0.40 of one per cent. of chlorine as hypochlorite. As is stated above, the smaller of these quantities is sufficient to destroy spores almost instantly. There are very few purposes to which disinfectants are applied that are not fulfilled by this solution of 1 to 100 of bleaching powder. It is not poisonous, does not injure clothing, bedding, etc., and is

almost without cost, since bleaching powder is worth only about five cents per pound. The sodium salt furnishes in some respects a more elegant preparation, since it leaves on evaporation sodium chloride instead of the hygroscopic calcium chloride. If prepared according to the U. S. P., it does not keep very well, but when made by passing chlorine gas into a solution of an excess of caustic soda, it shows very little tendency to undergo decomposition. Solution A, although rather concentrated, and frequently exposed to the light and air, has kept for a month without any appreciable change. A solution like this might be put on the market at a very reasonable price, and as it should be diluted with twenty parts of water, it would be far cheaper and more effective than any of the proprietary disinfectants. The odor of the hypochlorites is a slight objection to their use, but in dilute solution this is scarcely disagreeable. Where the odor is not to be regarded, the hypochlorous acid may be liberated by the addition of any common acid, thus increasing the oxidising power, and liberating a most effective gaseous disinfectant. I hope to make further experiments on this point at an early day.

To fix the value of solutions of the hypochlorites, the following method is sufficently accurate for ordinary purposes. A standard solution of potassium arsenite may be made by diluting seven parts of Fowler's solution with one and a half parts of water. This corresponds to a one half per cent. solution of available chlorine. To apply the method, a given volume of the hypochlorite solution is measured out, and the arsenite solution added in small quantities. Between each addition the mixture is well stirred, and a drop taken out on a glass rod and tested on a strip of paper saturated with iodide of potassium and starch paste and dried. As long as any hypochlorite is present, the blue iodide of starch is formed; but when it has all been used up in converting the arsenite into an arseniate, the paper will remain colorless. As each volume of the potassium arsenite solution required for this corresponds to one-half per cent. of available chlorine,

the calculation is very simple, *e, g.*, if one volume of the hypochlorite solution = 4.6 volumes of the arsenite solution, the amount of available chlorine present would correspond to 2.3 per cent. Since the preparations now on the market vary so much in the amount of chlorine they contain, this test should always be used to determine their value, and the amount of dilution required. Where the disinfectant is further diluted in use by being added to liquids or semi-solids, the original dilution should not be so great.

The hypochlorites possess the advantage over many of the metallic salts of not forming a coating of insoluble albuminoid matter around solid or semi-solid masses, and thus protecting them from further action. On the contrary, when used in moderately strong solution, they oxidise and disintegrate these materials. They are at the same time destroyed themselves in the reaction, so that we are rid of germs, organic matter, and disinfectant all at the same time.

Correspondence.

CHRONIC CONSTIPATION.

EDITOR MEDICAL CHRONICLE:

I desire to say a few words concerning a class of cases about which volumes have been written and yet more light is welcome. I refer to *chronic constipation.* The first months of practice brought many cases of this kind under observation, and, I am free to admit, failure in treatment was more often the rule than the exception. Finally, after reading all the literature obtainable on the subject, I decided upon investigating the claims of "Cascara Cordial," a preparation manufactured by Parke, Davis & Co., and also wrote that firm for all the printed testimony in favor of the preparation as a remedy in habitual constipation. A pamphlet was received and carefully examined. From that time dates my success in the treatment of chronic constipation. I find the

"Cascara Cordial" too weak for some very obstinate cases, so that it is necessary to add Fl. Ext. Rhamnus Purshiana, ʒ ss-i to the ℥ i. My usual prescription is the following:

℞—Fl. Ext. Rhamnus Purshiana, (P. D. & C.,) ʒ ii-iv
"Cascara Cordial," (P. D. & C.,) ℥ iss
Glycerine, ℥ iii

M. Sig.—Teaspoonful or less two or three times a day.

Careful directions (verbal) must be given regarding the administration of the medicine. A purgative effect must always be avoided. The use of three doses each day, though very small, is to be preferred to one large dose. Insist upon that valuable rule for daily efforts at evacuation after breakfast. Cease the administration gradually.

I have not attempted a discussion of the causes, pathology and diagnosis of chronic constipation. Needless to say these should be well understood. The above prescription admits of additions of other therapeutic agents which may be indicated in certain cases. "Cascara Cordial" has few incompatibles. I am preparing a series of cases treated, but will reserve them for a future time. "Cascara Cordial," diluted with aq. menth. pip., has yielded good results in constipation of infants eighteen months to two and a-half years of age.

I should be glad to read the testimony of fellow-practitioners in favor or against the above treatment.

W. W. Leonard, M.D.

South Evanston, Ill., March 16, 1885.

CONGENITAL RECTO-VESICAL FISTULA.

Editor Medical Chronicle:

January 19, 1885, was called to attend Mrs. B., aged 35 years, in her first confinement; found her in labor, which progressed steadily to its close. She was delivered of a male child of usual weight and well developed, except the absence of the *anus*, which condition was not

discovered for 8 hours after delivery. I was called and found the child sleeping soundly; had voided some urine. Had Dr. E. A. Lackland called in consultation, thinking that after a lapse of 24 to 36 hours the meconium would point, and an operation might be performed to relieve the little sufferer. The next day, 30 hours after birth, I found the child still resting well, but had voided fecal matter through the penis, showing a connexion between the intestinal canal and bladder. Under the circumstances an operation was not deemed advisable, and the child died five days after birth. A post-mortem was not allowed.

Livermore, Ky. A. W. Crow, M.D.

State Examining Board of North Carolina.

Editor Medical Chronicle:

North Carolina has at last shown herself to be the doctors' friend. The act which has recently passed the Legislature and is now a law, imposes a fine and imprisonment upon anyone who attempts to practice medicine within the limits of the State without a license from the State Board of Medical Examiners.

C. M. Poole.

Salisbury, N. C.

[Good for North Carolina. Next! Ed.]

Analects.

STRETCHING OF THE LINGUAL NERVE FOR NEURALGIA.

Mr. Clement Lucas operated for the relief of extreme neuralgia of the tongue, at Guy's Hospital, on November 11th, by stretching the lingual or gustatory nerve. He pointed out what he believed to be an original observation; that, if the tongue be seized at the tip and drawn forcibly out of the mouth and to one side, the lingual

nerve of the opposite side is made to stand out as a firm band beneath the mucous membrane on the side of the tongue, where it can be readily felt and secured. The operation was performed as follows. A suture was placed through the tongue to the right of the septum, by means of which the organ was drawn forcibly out and to the left side. A sharp-pointed hook was then passed under the nerve to fix it. The mucous membrane was next divided over the nerve for about half an inch, so that it could be readily seen, and an aneurism-needle having been passed immediately under the nerve, the sharp hook was withdrawn. The nerve was, in this way, easily reached and stretched.—*British Med. Jour.*

CHRONIC DYSENTERY.

Prof. Da Costa finds sulphate of copper, gr. $\frac{1}{12}$–$\frac{1}{8}$, four times a day, combined with opium, to be very effective in chronic dysentery. Other remedies he finds useful are bismuth, especially in children; nitro-hydrochloric acid, zinc sulphate, argentic nitrate, iron sulphate, or Monsell's solution (gtt. iij.-v.), or solution of the nitrate (gtt. xx.-xxx.) All except iron should be combined with opium. When other things fail, small blisters over the spot of greatest soreness sometimes do good. The diet should contain no starches, fruits or vegetables.—*Col. and Clin. Record.*

HEMORRHOIDS.

Dr. T. W. Poole, of Lindsay, Canada, expresses his opinion of this disease in the following language:—The Piles! Aha! I know them well, Each feature, though I may not see 'em; Old foes, which fume, and fret, and swell, And vex and plague my perineum. You blush at mention of a "pile," And would perhaps the theme avoid; Well, then, suppose, to put on style, We call the thing a hemorrhoid. Though bearing an ill-omened name, It seemed as if they might not pain us, When first, as visitors, they came, And took up lodgings in the anus.

But now, at each succeeding bout, The pelvic pains appear distincter, And there can be no longer doubt, Of their relations with the sphincter. You ask me, by what obvious sign, One may with certainty detect 'em. Well, I can only say that mine Are like a hornet in the rectum, Which, having wandered from the way, And angry at the situation, Stings right and left while yet it may, And tortures one in defecation. "Avaunt! it is a vulgar rhyme." Yet stay, there must be means to cure 'em: Oh, yes! if you but give them time, And meantime patiently endure 'em, There are a thousand cures, you know, All certain sure, as dead shot candy; 'Tis well to buy a score or so, And lay them by to have them handy. And when the hornet's rage is spent, And things assume their wonted quiet, The cure,—though it may not prevent, Will quickly quell the painful riot.–*Canadian Practitioner*. [To this graphic description we may add the following "cure." Ed.]

Professor Verneuil recommends (*Rev. Med.*) cold local applications and mild laxatives in the treatment of slight cases of hemorrhoids. For the more severe cases he employs forced dilatation. Hemorrhoids are caused, he says, by a strangulation of the superior mesenteric veins which traverse the muscular wall of the rectum. This strangulation gives rise to the formation of the venous tumors, precisely as varicose veins are occasioned by constriction from the ring of the soleus muscle. If now the muscular tracture be overcome, the venous circulation is restored and the hemorrhoidal tumors disappear. In order to insure success the dilatation sbould not be attempted with the fingers, but should be accomplished by means of a speculum. By means of this instrumental dilatation the author asserts that hemorrhoids may be radically cured within a week without the use of the knife.—*N. Y. Med. Record.*

INCUBATION OF DISEASES.

Vacher divides these various periods into five sections, as follows :

1. Shortest—One to four days—cholera (malignant), charbon, plague, catarrh and dissecting fever.

2. Short—Two to six days—scarlet fever, diphtheria, dengue, idiopathic erysipelas, yellow fever, pyemia, influenza, pertussis, glanders, farcy, grease, croup, puerperal fever.

3. Medium—Five to eight days—relapsing fever, gonorrhœa, vaccinia, inoculated small-pox.

4. Long—Ten to fifteen days—natural small-pox, varicella, measles, rotheln, typhus fever, typhoid fever, mumps, malarial fever.

5. Longest—Forty days or more—syphilis and hydrophobia.

Small-pox ceases to be infectious in 56 days after the appearance of the eruption; modified small-pox in 35 days; scarlet fever in 49 days; diphtheria in 28 days; erysipelas in 35 days; typhus fever in 21 days; typhoid fever in 28 days, and mumps in 21 days.—*Western Med. Rep.*

HABITUAL CONSTIPATION.

The *Union Med.* gives the following formula:

Extract of Socotrine aloes . .	1.80 gramme.	[27 grs.]
Pure ox-gall	1.20 "	[18 grs.]
Resin of podophyllum . . .	0.15 "	[2½ grs.]

To be divided into ten pills. One pill to be given every evening. As an occasional remedy, a pill may be given morning and evening.—*N. Y. Med. Jour.*

DIURETIC CLYSTER.

Dr. Moutard-Martin communicates to the *Deutsche Med. Zeitung* the results of the use of an infusion of digitalis leaves as a clyster, where a diuretic was needed, but could not be given by the mouth, on account of gastric irritation. Five grains of the leaves were infused in about 6½ ounces of water, and injected into the rectum. The diuretic action was prompt and sufficient.—*National Druggist.*

PALLIATIVE MEASURES IN RUPTURED EXTRA-UTERINE PREGNANCY.

Another woman has passed from health to the grave in a few hours; another home has been made desolate; and another victim to delay and palliative hypodermatics of morphia and brandy-and-water in drachm doses has been added to the list, already too long, of cases that have been lost for want of surgical treatment.

A case has been recently reported, in a western medical journal, in which the symptoms of rupture of an extra-uterine fetal sac were complete, and the diagnosis of extra-uterine pregnancy was concurred in by three practitioners, and the following treatment adopted: "Sulphate of morphia in one-sixth-grain doses, hypodermatically, to control the pain, and brandy, both by the mouth and under the skin, as a stimulant, A sinapism over the stomach and bowels assisted in giving some measure of relief." The patient died in sixteen hours and a half. Nothing is said of an attempt to control the hemorrhage, which every one must have known was draining away the women's life. Nothing is said of a desire to open the abdominal cavity to stop the hemorrhage and remove the foreign body. Is the recorded experience and the teaching of the surgical leaders of the day to go for nothing? Are there any who think that a patient in this situation dies of aught else save hemorrhage, and controllable hemorrhage? If the hemorrhage be not controllable, why do the patients live for sixteen and twenty or thirty hours after the rupture? Are there those in the profession who do not know that the mere exposure of the abdominal cavity to the air will often check a hemorrhage which would otherwise prove fatal in the closed cavity? Surely in these days of great and brilliant triumphs in abdominal surgery, when patients recover after intestinal wounds and resections, when the most desperate "forlorn hopes" recover, one should not hesitate to open the abdomen in a case of this kind, when two or three ligatures and some clean water are all that are required.

There is no palliative measure for a ruptured extra-uterine cyst; there is no expectant treatment; and there is no other way known to medicine by which a woman in this condition can be reasonably expected to survive save by the prompt use of the knife—and there is no reason for thinking that she would die if this be resorted to in time. And until she is practically dead it is never too late to try and save her.—*N. Y. Med. Record.*

DIFFERENTIAL DIAGNOSIS OF SIMPLE AND TUBERCULOUS MENINGITIS.

In an analysis of a number of cases of meningitis occurring in the Children's Hospital at Stockholm, Dr. O. Medin endeavors to formulate the points of difference in the tuberculous and simple forms of the disease. Tuberculous meningitis attacks only those children already suffering from tuberculosis of other parts, while simple acute meningitis occurs usually in previously healthy individuals. The former manifests its onset by convulsions, frequently strabismus, and dilatation or contraction of the pupils. Vomiting is frequent at the commencement, diarrhœa is the usual condition, and constipation is rare. The abdomen is never flat. The simple form begins with somnolence, twitchings, sudden changes of color in the face, and hyperesthesia. More frequently than in the tuberculous form we meet with the hydrocephalic cry, and a paralysis limited to the arms or to the face. The tuberculous variety is always fatal in its termination.—*London Practitioner.*

SAND-BAG FOR THE SICK-ROOM.

One of the most convenient articles to be used in a sick-room is a sand-bag. Get some clean, fine sand; dry it thoroughly in a kettle on the stove. Make a bag, about eight inches square, of flannel, fill it with the dry sand, sew the opening carefully together, and cover the bag with cotton or linen. This will prevent the sand from sifting out, and will also enable you to heat the bag

quickly by placing it in the oven, or even on the top of the stove. After once using this, you will never again attempt to warm the feet or hands of a sick person with a bottle of hot water or a brick. The sand holds the heat a long time; and the bag can be tucked up to the back without hurting the invalid. It is a good plan to make two or three of the bags and keep them on hand, ready for use at any time when needed.—*Popular Science News.*

OPIUM IN HEMOPTYSIS.

A writer in the *Physician and Surgeon* says: Although a multitude of drugs are recommended, and not a few almost regarded as specifics, it must be admitted that the profession has at command but a few preparations that have unquestioned influence to control pulmonary bleeding. Ergotine and the fluid extract of ergot have been mentioned; oil of turpentine given by mouth or rectum, exhibits positive action in hemoptysis or phthisis. But it cannot be too forcibly urged that the most important condition requiring treatment is the terror manifested by the patient, so alarming and distressing to the friends, which in turn tends to further alarm the patient. The administration of opium in some of its forms is clearly indicated to calm the excited brain and reduce the throbbing heart. Give it hypodermically, that its physical effects may be quickly produced. The result is magical. The patient's actions and countenance are speedily calmed, the bleeding stops, the much-needed refreshing sleep is obtained, and the over-estimated danger is averted.—*Chic. Med. Times.*

The *Public Herald* of Philadelphia, published by L. Lum Smith, is waking up the frauds and quacks. He exposes the shameless forgery of certificates recounting the qualities of a widely-advertised "Stomach Bitters," to which we called attention in the January number of the Chronicle. The *Herald* is lively reading and fully worth the subscription price, fifty cents per year.

Editorial.

ARE WE PREPARED TO RESIST AN INVASION OF CHOLERA IN THIS COUNTRY?

There is a pretty general fear among the medical profession that cholera will reach the western shore of the Atlantic ocean during the coming summer. This fear is based upon the fact that whenever heretofore the disease has prevailed as an epidemic in Europe, it has invaded this country in the same or succeeding year.

While this previous behavior of cholera does not justify any alarm in anticipation of the visit of this unwelcome guest, it is yet sufficient reason for watchfulness on the part of our sanitary authorities. They should be on the alert to detect the first signs of a renewed outbreak abroad, put the coast quarantine in effective working order, and place our cities and towns in such a sanitary state that even if the disease gains an entrance it will fail to find the conditions necessary for its propagation. What is being done to secure these desiderata?

We have authority for stating that sanitary inspectors (medical men of standing) have been appointed at a number of foreign ports to prevent the shipment of passengers or cargoes from infected places without previous thorough disinfection. The points where these inspectors are stationed are Liverpool, London, Hamburgh, Havre, Bordeaux, Marseilles, Naples, Genoa and Havana. Inspectors of rags have also been appointed at Hull, Berlin, various ports on the Mediterranean, Japan and the Sandwich Islands. All consuls of the United States are also required to immediately report by cable to the State Department, notice of any outbreak of cholera.

The Treasury Department has established, or will soon equip, National quarantine stations at Ship Island in the Gulf of Mexico, Sapelo Sound on the coast of Georgia, Cape Charles and Delaware Breakwater.

The last Congress appropriated a large sum of money to be expended under the direction of the President in the event of an actual or threatened epidemic. The

Marine Hospital Service or the National Board of Health will probably be designated to disburse this fund should it become necessary. Under existing regulations, Governors of States in which the sanitary fund is inadequate to carry out appropriate sanitary measures for the protection of the country, may apply to the general government for aid. Thus it will be seen that the National Government is mindful of its duty in the matter, and has taken all the action necessary in the premises. A few of the individual States, among which Illinois is most prominent, have also instituted proper measures for defense; some cities have been placed in a fairly good sanitary condition, and the general public has begun to take a more active interest in the objects and methods of public and private sanitation.

On the whole we regard the prospect as favorable. Our defences are doubtless still weak at many points, but there can be no question that we are in better condition to resist a destructive invasion of epidemic disease than ever before in the history of the country.

There should, however, be no relaxation of national, state or municipal watchfulness. The price of immunity from epidemics is constant enforcement of effective sanitary measures.

MEDICAL FEES IN NORTH CAROLINA.

We have been much interested in a pamphlet detailing the merits of a disagreement between the Raleigh Academy of Medicine and one of its members over the Academy's fee table. The majority of the Academy seem to be strict constructionists, so far as the fees for examinations for insurance companies and beneficial societies are concerned, while the offending member seems to be somewhat latitudinarian upon this point. The Academy's fee-table fixed the fee for these examinations at five dollars in all cases, while the physician above referred to, as well as a number of others who are members of the State Medical Society, examined applicants for admission to the Knights of Honor, Royal Arcanum and similar bodies

for a fee of two dollars. This action seems to have ruffled the dignity of the academicians of Raleigh, who thereupon proceeded to make it unpleasant for the transgressors. Not only were the latter debarred from membership in the academy—doubtless a highly desirable dignity—but they were ruthlessly cut off from all professional relations with the learned academicians. At this latter action the victims naturally feel aggrieved, and propose to lay their case before the profession of the State of North Carolina at the coming meeting of the State Medical Society.

The position taken by the Raleigh Academy of Medicine is so utterly absurd that it seems a waste of time to discuss it seriously. But there is a serious aspect of the affair which demands notice. A medical society is not merely a trades-union to regulate and enforce fee tables, but it should be something vastly better and nobler. If the Raleigh Academy of Medicine can find no worthier subjects to discuss than the regulation, under penalties, of the charges for services of its members and others confessedly in good standing as physicians, the sooner it drops its honorable title and calls itself an organisation for intimidating men who do their own thinking, the better for the welfare of the profession of the State.

Current Literature.

The Diaphragm and its Functions. Considered especially in its Relations to Respiration and the Production of Voice. By J. M. W. Kitchen, M.D. Albany, N. Y.: E. S. Werner. Price, $1.00.

A well-written monograph on the anatomy and physiology of the diaphragm. The corset comes in for some vigorous denunciation, which we think is a little excessive. Vocalists, public speakers and physicians can gain much valuable information from its pages.

Cocaine and its use in Ophthalmic and General Surgery. By H. Knapp, M.D., Professor of Ophthalmology in the Medical Department of the University of the City of New York. New York and London: G. P. Putnam's Sons, 1885.

Dr. Knapp has here collected all the published observations and experience upon the use of this drug, which has of late attracted so much attention. The book is an exceedingly attractive specimen of typographical art.

The London Medical Student and Other Comicalities. Selected and Compiled by Hugo Erichsen, M.D. Detroit, Mich.: Published by H. Erichsen, 11 Farmer street. Price, $2.00.

The "London Punch" of to-day is rather dreary reading compared with the "Punch" of Thackeray, Mark Lemon, Hood and their brilliant confréres of the early Victorian age. So, too, the humor of the medical student of the present falls far behind that of his London prototype, who is here sketched by the hand of a master. Dr. Erichsen has done a service in rescuing from oblivion these sketches and rendering them accessible to the profession at large. We are sure that everyone with any humor in his soul will enjoy the fun which is crowded into the pages of this book.

The Physician Himself and What He Should Add to His Scientific Acquirements in Order to Secure Success. By D. W. Cathell, M.D., Late Professor of Pathology in the College of Physicians and Surgeons of Baltimore. Fourth Edition. Baltimore: Cushings & Bailey, 1885. Price, $2.00.

In noticing the three previous editions of this most excellent book, we have expressed our opinion of its extremely great value, especially to young physicians.

In the present edition the improvements and additions are made manifest on every page. It has no equal as a guide to the study of human nature as it is presented to the doctor. The knowledge and practice of its injunctions will compel success, and repay the original outlay in time and money more than a thousand fold.

Flotsam.

POWDERED rice is recommended as a styptic.

A NUMBER of cases of glanders in the human subject are reported from Illinois.

DR. WM. BRODIE, of Detroit, has been elected President of the American Medical Association.

THE newspaper reporters have begun to criticise the diagnosis and treatment of Gen. Grant's case. We shall doubtless now learn something reliable about it.

SODIUM salicylate is recommended for migraine. It is given in 15 grain doses fifteen minutes apart. Two doses are said to give complete relief from the attack.

THE *North Carolina Medical Journal* properly protests against wasting time at the meeting of the State Medical Society in social entertainments to the detriment of scientific work.

THE virus of poisonous cheese has been isolated by Prof. V. C. Vaughan, of the University of Michigan. The poison is crystalline, and gives reactions similar to the ptomaines.

AN ovariotomy on a child twenty months old was recently performed in Berlin by Dr. Roemer. The patient recovered without a bad symptom. The tumor was dermoid in nature.

THE annual meeting of the Medical and Chiurgical Faculty of Maryland has been postponed to May 12, in order not to conflict with the meeting of the American Medical Association.

THE *Sanitary Monitor* is the name of a new fourteen-page monthly devoted to sanitary matters, published in Richmond, Va. Dr. J. F. Winn is editor and proprietor. Subscription, $1.00 per year.

DR. GEO. M. STERNBERG, of the U. S. army, has been designated by Secretary Bayard to represent the United States at the session of the International Cholera Conference, which meets in Rome on the 15th of May.

Dr. Frank Woodbury, editor of the *Philadelphia Medical Times*, has been elected Professor of Materia Medica and Therapeutics in the Medico-Chirurgical College of Philadelphia. We congratulate both our confrére and the institution which has gained such a valuable accession.

The appointments of officers of sections of the International Medical Congress have caused considerable dissatisfaction in various quarters. This was made manifest at the meeting of the American Medical Association, where the action of the General Committee was pretty severely criticised. The Association finally took a hand in the work by appointing a large additional committee.

There will be issued by the New England Publishing Co., Sandy Hook, Conn., during the month of May, a book entitled Berlin as a Medical Centre, by Horatio R. Bigelow, M.D., of Washington, D. C. This book will be a complete and accurate medical guide to Berlin, giving instructions in reference to board, clinics, lectures, expenses, etc., and all information that will be necessary for the medical student abroad. The price will be $2.00.

People generally have but a faint conception of the magnitude and influence the press of this country has attained. From a careful examination of the advance pages of the American Newspaper Directory, issued May 1st, by Geo. P. Rowell & Co., of New York, it appears that there are 14,147 newspapers and periodicals published in the United States and Canada; of these the United States has 12,973, an average of one paper for every 3,867 persons. In 1884 the total number of newspapers was less by 823 than at present, and while the gain this year is not so marked as in some previous years, it is still considerable. Kansas shows the greatest increase, the number being 78, while Illinois follows with a gain of 77. As an index to the comparative growth and prosperity of different sections of the country, especially the Territories, the number of new papers forms an interesting study, and may well occupy the attention of the curious.

—THE—

MEDICAL CHRONICLE.

BALTIMORE, MAY, 1885.

Original Articles.

ARTICLE I.

SCHIZOMYCETES.

By J. S. MILLER, M. D., of York, Pa.

The essay to which was awarded the first prize of the Alumni Association of the College of Physicians and Surgeons of Baltimore, March 12, 1885.

The schizomycetes or bacteria have been variously named by different authors. PASTEUR speaks of them as *vegetaux cryptogames ou microscopiques*, *animalcules*, *champignons*, *infusoires*, *torulacees*, *bacteries*, *vibrioniens*, *monades*, *mycoderma*. In Germany the terms *monaden*, *vibrionen*, *mikrozyma* and *mikrospora* and *monadine* have been used. In England we find different writers also using various terms such as *monads*, *zymes* and *microzymes*. They are organisms of extreme minuteness. Many of them are so small that they approach the limit of visibility only when the highest powers of the microscope are used. They are defined as globular, oblong, rod-like or spirally coiled masses of protoplasmic matter enclosed in a more or less distinct structureless substance. All those minute and simple forms of life with which the microscope brings us into acquaintance, essentially consist of particles of protoplasm, each kind having usually a tolerably definite size and shape, and showing (at least in some stages of its existence) something distinctive in its habit of life. In the present state of our knowledge it is impossible to lay down any definite line of demarkation between the two great kingdoms, vegetable and animal, inasmuch as there is no single character by which we

are able to differentiate vegetable from animal organisms. It has been settled and put beyond all question of doubt, that the fundamental phenomena of life are identical in plants and animals and that the living substance which puts them into exhibition is of a character essentially the same throughout both kingdoms. We no longer suppose that *living action* can only be exhibited by *organised structures*. But we know that all the functions of life may be carried on by minute jelly specks, in whose viscid homogenous semifluid substance nothing like organisation has ever been detected or made out; and moreover that even in the very highest organisms which present us with all conceivable varieties of differential structure, the essential part of the life work, is done by the very same material. It has been shown that the essential part of life is the same whether found in the vegetable or animal kingdom, and that all attempts to definitely fix the boundary between vegetable and animal have failed. Formerly spontaneous motion was supposed to be possessed by animalcules only, but later this was found to be an error, and to-day the characteristic which is most generally applied to those organisms which most closely approximate each other is the dependence of the organism upon *organic compounds ready formed* for its nutriment, which it takes (in some way or other) into the interior of its body; or on the other, its possession of the power of *producing the organic compounds* which it applies to the increase of its body, at the expense of the *inorganic compounds* with which it is supplied by air and water. The former is only a general characteristic of the animal kingdom and not a perfectly absolute one; the latter is unmistakably the most prominent attribute of the vegetable, and but for the existence of this power of vegetable organisms, animal life would be impossible, as will be readily seen upon due consideration.

Continuing our inquiries longer and further as to the position of the bacteria in the two great kingdoms, other things that are of great importance and significance are seen. We find on examining the simplest class or type

of animals (the protozoa) that it would be impossible to imagine a more simple form of life or matter than certain members of this class represent, whose bodies are merely specks or small masses of protoplasm devoid of any permanent organs or portions especially adapted or set apart for the performance of any distinct function. Notwithstanding this great simplicity of structure the primary acts of animal life, such as the taking of food, and its further preparation for the animal economy, digestion and assimilation and reproduction are carried on as effectively and certainly by these primary manifestations of life, as by the highest and most complex forms. The protozoa are exclusively supported either upon other protozoa or upon protophytes, as are the highest animals upon the flesh of the lower animals or upon the products of the vegetable kingdom, whilst *protophytes* as well as the highest plants obtain *their* nourishment from the atmosphere or the water in which they are found. The protophytes and highest plants are distinguished by their power of decomposing carbon dioxide (CO_2) under the influence of sunlight; setting free its oxygen and combining its carbon with the elements of water, thus forming the carbo-hydrogen compounds, and with the ammonia of the atmosphere to form the albuminoid compounds. It has been demonstated that even such *protozoa* as are neither possessed of mouth or stomach (for illustration the amœba) receive their food or alimentary matter direct into the very substance of their bodies, in which it undergoes a certain amount of change or digestion, whilst the protophytes absorb their nourishment through their external structure or covering only, and are wholly unable to take into their structure any solid particle of matter ready formed. "Motion which was formerly considered the distinctive attribute of animality, we now know is possessed by many of the protophytes. Perhaps all protophytes at some period of their lives possess the property of motion. Not only has motion been found common to both *protozoa* and *protophytes*, but the instruments of this motion have been found to possess identi-

cally the same character in the plant as in the animal. This motion is caused by the hair-like filaments—termed cilia or lash (when long and whip-like they are called flagella); by the rythmical vibration of these the body of which they are a part is carried in a definite direction." "The contractility which these organs possess is supposed to be a general intensification of that of the general protoplasmic substance of which they are special extensions." There are plants, however, which resemble animals in their dependence upon organic compounds prepared by other organisms. These plants are unable to effect the fixation of carbon by the decomposition of the carbon dioxide ($C O_2$) of the atmosphere which is the very first stage in their production. We find this the case among the phanerogams (flowering plants), with the leafless parasites which obtain their support from the delicious juices of their hosts, also the lower cryptogams and the whole group of *fungi*. The *fungi*, however, depend rather for their nutritive material upon organic compounds in a state of decomposition, many of them possessing the property of promoting that process by their *zymotic* (*fermentative*) action. Throughout the whole vegetable kingdom the plan of organisation presents the remarkable feature of uniformity, alike in the highest and most complicated plants and in the very lowest and simplest forms of vegetation.

The *cell* is what makes up the plant (the animal as well), it matters not how complex its structure may seem to be. It consists, except in those forms which lie near the border line between *animal* and *vegetable* life, of a particle of protoplasm enclosed by an external covering called *cellulose*—"a non-nitrogenous substance nearly allied ln chemical composition to starch." The essential difference between the structure of the lowest and highest plants consists in the following:—"The cells produced by the cell multiplication of the primordial cell of the protophytes are all mere repetitions of it and one another, each living *by* and *for* itself—those produced by the like cell multiplication of the primordial cell in the oak or

palm not only remain in mutual connection but undergo a progressive differentiation." The single cell which is the simplest type of all vegetation is found in the lowest forms of the group of fungi; whether they contain chlorophyll, and rank as algæ, or whether they contain no chlorophyll, as the schizomycetes, all are classed as protophytes. The photophytic algæ possess the power to form chlorophyll and the carbon compounds out of the simple compounds—water, carbonic acid and ammonia in presence of sun light; whilst the protophytic fungi are dependent for their nutriment upon the more complex compounds which are supplied by the organic world only. The study of the group of schizomycetes reveals many points of interest as well as of value to the physician; and hence is of greater importance to him than any other of the photophytic fungi.

The schizomycetes consist of a series of extremely minute organisms known as *bacteria*, etc., which Ehrenberg and Dujardin formerly ranked among animalcules. The schizomycetes are no longer ranked among animalcules or animals, but are classified as plants. They are all aquatic in habit. They are unable to live in pure water but thrive best in liquids that contain decomposing or decomposable matter. Many of them possess the power of growing and reproducing in solutions in which ammonia salts of the vegetable acids are combined with purely inorganic ash salts.

"Thus the schizomycetes resemble ordinary plants in forming nitrogenous compounds out of ammonia, which animals can not do; while they differ from green plants in their inability to form carbon compounds by the decomposition of carbonic acid, requiring for their support the carbo-hydrates or their derivatives." They are all composed of minute jelly specks termed cells, which possess the power of rapid multiplication by subdivision. Although devoid of color, or nearly so, they sometimes form reddish, bluish, or brownish coloring matters; and thus when their multiplication has been carried to a sufficient extent they become visible to the unaided eye, either as colored

films on the sides of the vessels holding the solutions, or imparting their color to the whole liquid as is the case with colored milk. The schizomycetes are either true parasites and inhabit the moist surface of organic bodies or are found in fluids holding organic compounds in solution, from which they derive their nutriment, and by doing this in some way or other decompose the substance which they inhabit, thus producing putrefaction and fermentation. It matters not what form of putrefaction found in either the animal or vegetable kingdom, it is a fermentation set up by schizomycetes of some kind or other. Organic matters are not, as formerly supposed, unstable bodies, but on the contrary they are perfectly stable, and do not possess any power in themselves to change. Organic matter will not putrefy on being freely exposed to the atmosphere, provided the proper precautions to entirely exclude the schizomycetes have been taken. Hence, it has been well remarked that "putrefaction is a concomitant not of death but of life." The remark that fermentation and putrefaction are always due to fungi does not exclude the possibility of kinds of decomposition affecting organic bodies, in which fungi play no part. Such changes are known to occur. Their form is of slow oxidation or combution in which carbon dioxide (CO_2), water and (in nitrogenous substances) ammonia are found. Organic matters undergo these slow changes when in contact with water and atmospheric air; they also occur in the living organism. This process when found in dead organic matter corresponds to what is known as dry rot or mouldering. Brieger (Zeitsch. f. Klin. Med. III.) thinks that the various aromatic products of the putrefaction of albumen are equally well obtained whether it is set up by the addition of sewer mud or of pancreas. The essential factors are the duration of the putrefactive process, the temperature and the amount of oxygen present. The albuminoids undergo the same changes in the intestines as they do in artificial putrefaction brought about outside the body. The same changes or series of changes are also set up in putrid pleurisy, bronchitis and pulmonary gangrene.

As no sexual organs have been observed in the protophyta the genera of bacteria will not have the same significance as those of the higher plants. They are not based on the reproductive features but upon the different characters of the vegetative cell forms. Size is the easiest character on which distinction may be based, but even this is by no means easily determined in the minuter forms. Hence, it is not at all improbable that some of the species and genera represent different developmental stages of the same fungus. Cohn, whose classification I propose to follow, classifies them according to their form into SPHAEROBACTERIA (globular cells), MICROBACTERIA (minute rod like cells, bacteria proper), DESMOBACTERIA (larger rod like filiform cells) and SPIROBACTERIA (twisted or spiral cells). Movements have been noticed in all except the first form, hence, the protoplasm of the three latter forms is contractile. They are not destroyed by potash, ammonia, or dilute acid, therefore, the probabilities are that they possess a bounding membrane.

The growth of bacteria is longitudinal, new cells are formed by what is known as transverse subdivision. These may remain in connection or may be detached. Bacteria have two conditions or states, a still and an active one. In the still condition they usually exhibit the *Brownian* movement, an oscillatory motion which is common to all or nearly all very finely divided solids held in suspension by a fluid. The Brownian movement can very easily be distinguished from the rapid translation from place to place which occurs in the really active bacteria. In one of the largest forms investigators have been able to observe the cilia which effect the movements. Many forms appear to have a serpentine motion, but this is an optical illusion. In this bacterium as in all others the body does not rapidly change its form; but its joints are bent zigzag upon its axis as it moves, giving rise to the appearance of undulatory counteraction (*Huxley and Martin's Practical Biology*).

The *sphaerobacteria* are the smallest of all known bacteria. Owing to their extreme minteness they are scarcely

measurable. Two genera are distinguished, *micrococcus* and *sarcina*. The spherules known as micrococci do not exhibit any perceptible organisation but it is very probable that they are differentiated into an external covering or membrane and cell contents. Whether found in liquids or in tissues, they are either isolated or arranged like strings of beads or grouped in colonies (zooglœa).

The genus micrococcus includes several species which are of various size. "Many of them as they multiply produce yellow, red, blue, green or brown coloring matters." Micrococci do not all flourish in the same kind of liquid or nutriment, and the effects which they produce are various, according to the kind of liquid or soil in which they flourish. The micrococci are most frequently found in connection with the infective diseases; whether these diseases are due to them or other influences has not been determined. *Toussaint* and *Pasteur* have shown (Comptes Rendus, Nos. 6, 17, 18, 1880) that fowl cholera is caused by an invasion of micrococci.

The genus sarcina is very clearly marked; various species have also been detected. It is found most frequently in matters vomited by persons suffering with a disorder of the stomach. Its detection in the contents of the stomach under circumstances which point to a healthy condition of that organ indicates that it is a not very uncommon tenant of that organ even in health, and that its accumulation there may produce no inconvenience. Carpenter says that it seems probable, therefore, that its presence in disease is rather to be considered as favored by the changed state of the fluids which the disease induces (either an acid or a fermentable state of the contents of the stomach having been generally found to exist in the cases in which the plant has been most abundant), than to be itself the occasion of the disease, as some have supposed. The sarcina is found in the form of clusters of adherent cells arranged in squares.

The *microbacteria* are classed as a single genus—*bacterium*. The principal species are *bacterium termo* and *bacterium lineola*. Bacterium termo appear at first in

form of minute cylindrical rods. Sometimes they are found at rest; at other times they move around more or less actively. They are often seen coupled in pairs, which is due to their manner of subdivision. They do not usually form chains, but are grouped as zooglœa. The bacterium termo is found in putrefying matters usually. Bacteria lineola resembles bacterium termo quite closely, but is larger in every way. It is found in water and in infusions on potatoes. It swims about through the water, moving forward or backward; at times it is found to be motionless. Whether bacterium termo produces spores or not, remains to be demonstrated.

The *desmobacteria* are cylindrical rodlets of various length; while some are thick others are thin and delicate. Cohn describes a staight form which he calls bacillus and a wavy form which he calls vibrio bacillus; it increases by transverse subdivision and very frequently forms a long string commonly referred to as leptothrix (HALLIER). Bacilli pass through both a resting and swarming state; their organs of locomotion are flagella or cilia. The best known representatives of this genus are bacillus subtilis, bacillus anthracis, bacillus tuberculosis and bacillus lepræ.

These various specific forms are distinguished by their size and the relation of their length to their breadth. Some are cut off square at their ends, others are rounded off or even pointed. The life histories of these various species differ in many details. The features which are constant in all, are the longitudinal growth of the rodlets, their transverse subdivision and the formation of spores or gonidia. The typical example of the last named group is the bacillus anthracis, about which more is certainly known than any other microparasite. It is seen in the blood of animals suffering with splenic fever or anthrax. That the bacillus anthracis is the sole cause of anthrax needs no further proof. The spores which are hardier and better able to withstand destructive influences are the commonest medium of infection. Such spores develop in blood of animals after death from anthrax—

even after burial (Koch). The spores will in course of time reach the surface of the ground if the animals have not been deeply buried (a meter is considered sufficiently deep for protection). The *spirobacteria* are divided into two genera: spirochæta and spirillum. Of the first genus the spirochæta Obermeyeri and spirochæta denticola are the most important species. The former is found in the blood of patients suffering with relapsing fever during the paroxysms. The latter is found in the mouth and nose of persons who are perfectly healthy, or who may be suffering with nasal catarrh. The former moves through the blood at a rapid rate, and unless it can by some means be fastened down or arrested in some way or other it can not be seen. There remains but little doubt that relapsing fever is caused by the invasion and multiplication of the spirochæta Obermeyeri within the blood.

No structure has been made out in the spirillum. Its life history is not known in detail. Reasoning from what really is known about it, we conclude that its multiplication is exceedingly rapid within the body. It is probable that it produces resting spores. The spirillum volutans is the largest of all known bacteria; it is found in stale liquids after having undergone the stages of active putrescence. Its large size is not its only distinguishing characteristic, but its granular protoplasm and large pair of flagella serve as distinguishing characteristics. By means of its flagella it is enabled to move around through the liquids very rapidly. It is sometimes found quiescent. The whole of this group either multiply by the so-called transverse subdivision or by the breaking up of their endoplasm into spores. No conjugation or any other form of sexual generation has been seen in any of the bacteria. Whilst many facts concerning bacteria have been discovered and demonstrated, we still are wanting in knowledge concerning them. Their life history which is of the greatest importance can not be said to be known until after the discovery of their method of sexual generation which still lies hidden. Bacteria like

all other living things, flourish best when a certain definite kind of food is supplied to them. Their development will not be normal if the proper nutritive principles are withheld from them. The substances requisite are obtained from both the organic and inorganic world (carbohydrates and albuminoids). The carbon and nitrogen necessary are derived mainly from animal and vegetable matter. The inorganic substances are obtained from salts containing sulphur, phosphorus, magnesium and potassium. Bacteria are able to assimilate nitrogen from ammonia, urea or nitre provided the other mineral substances necessary are present with sugar or some other appropriate carbon compound. Sugar is the most accessible and perhaps the best of all carbon compounds with which to supply bacteria. The nutritive principles named are not sufficient by themselves but they must be associated with water in sufficient quantity when presented to bacteria as food. From the preceding it can be plainly seen that none of the bacteria are able to flourish or develop when water is withheld from them. Neither can they develop in water devoid of the proper nutritive principles. They not only cease to develop but fall to the bottom of the liquid after they have consumed all the nutritive matter held in solution. When water is lacking entirely, bacteria may and do continue to live for some length of time; it is the same when all nourishment has been consumed in a liquid, they cease to develop but continue alive for a period of time. Bacterial spores are more tenacious of life, and must have water for development. Spores deprived of water are able to maintain life almost indefinitely. Beside the nutritive matter named, free oxygen is absolutely necessary for the development of many of the bacteria; others can develop without it, provided they are otherwise favorably situated, and in circumstances where they can set up fermentation.

According to Koch the anthrax bacillus perishes if it is allowed to become dry, while the spores may be preserved for years in the dried state; they may even be kept moist for a time without losing their power to germinate or to produce the specific infection.

Dr. Bastian, in his work entitled "Evolution and the Origin of Life," is very emphatic in his affirmation that living matter is unable to maintain life when exposed to a temperature even a few degrees below that of boiling water. He also refers to the experiment of Spallanzani on seeds, and extends the results observed with special kinds of living matter to living matter in general. It has been shown, he writes, and is believed by the great majority of biologists, that the briefest exposure to the influence of boiling water is destructive of all living matter. The late M. Pouchet collected the seeds of a plant called *Medicago*, found in Brazil, and boiled them for four hours, after which he placed the seeds in proper soil, and, to his surprise, some of the seeds germinated. On further investigation he found the majority of the seeds, after boiling, became swollen and disorganised; but amongst these disorganised seeds he found others that had refused to imbibe water, swell or change from their natural form in any way. On picking out the seeds which had not changed after test with boiling water, and placing them under favorable influences, they germinated and gave birth to a new crop. On placing the swollen seeds under the same influences they were found to be entirely devoid of life, and thus incapable of germinating. This was communicated to the Paris Academy of Sciences, and is recorded in the Comptes Rendus for 1866, vol. lxiii., p. 939. From what has been written it certainly must not be difficult to comprehend that the exterior or surface of a seed or germ may be so influenced by desiccation and other causes, as to practically prevent or stay contact between it and the surrounding liquid. The body of a germ, moreover, may be so indurated by time and dryness as to resist powerfully the insinuation of water between its constituent molecules. It would be difficult to cause such a germ to imbibe the moisture necessary to produce the swelling and softening which precedes its destruction in a liquid of high temperature. The development of bacteria is greatly influenced by the temperature of the nutrient fluid in which it resides.

When the temperature is lowered the result is a retarded and weakened vital process, and ultimately their vital action is entirely ended. But if the temperature is raised the vital action becomes more active and pronounced until a certain maximum is reached, after which, if the temperature is raised still higher, they in most instances suddenly and rapidly die. The maximum temperature for fungi has not been definitely fixed; it varies in the different species. A few, according to Van Tieghem, are capable of growth at 70°–74° (Centigrade.) No bacteria are capable of developing at a temperature of 5° C. They are not absolutely killed by even great extremes of cold, but on exposure to a temperature of 5° C. and lower they become stiff and immobile. The *rigor frigoris* is enunciated at different temperatures in different species; in the bacteria termo it sets in at 5° C., in bacillus anthracis at 15° C. The most favorable temperature for the development of the B. anthracis is from 30°–40° C. At 42° C. development ceases. B. termo develops best between 30°–35° C. The life of all bacteria and bacterial germs is destroyed by boiling hot water or vapor when freely exposed to it for a sufficient length of time. The spores have been found to possess greater tenacity of life than the bacteria, and do not succumb to the destructive influence of boiling water or heat in any form as readily as the bacteria. Dry air is not as destructive of either the bacteria or spores as moist. They maintain life for a greater length of time in dry air heated to a high temperature than in moist air heated to the same temperature. Spores can endure a temperature of 140° C. for three hours or more before their vitality is entirely destroyed.

Bacteria can not endure a temperature of 100° C. for an hour. When heat is used with a view to disinfect certain articles, it should be remembered that it penetrates such articles as pillows or bundles of clothing very slowly. Pillows and similar articles can not be said to be perfectly disinfected until after an exposure of three hours or more to a heat of 140° C.—(Wolffhugel.) Super-

heated steam at 105° C. kills all bacterial germs. A jet of steam is more powerful than steam in a closed chamber; it will kill all kinds of germs in from ten to fifteen minutes, and it readily penetrates the articles to be disinfected.—(Koch, Gaffky, Loffler.) When using water for disinfecting purposes, care must be taken that the heat is kept up long enough, i. e., until all the parts are warmed up to 100° C.—(Ziegler.) Other conditions than thermal are of great importance in bacterial development. Given a liquid in which the thermal factor is perfect, so far as bacterial development is concerned, and introduce a non-nutritive substance into the liquid, a change is initiated. Substances like corrosive sublimate, bromine, iodine and some of the acids, have a powerful influence over bacteria, and in small quantities so affect the fluid as to kill the organisms by putting an end to their growth and fermentative action. Other substances only interfere with the development of the organisms when introduced into the nutritive fluid in large quantities; the organisms are not killed outright, but development is interfered with by reason of the preponderance of the non-nutritive over the nutritive substance; hence these substances produce no injurious effects upon the organisms themselves.

According to very careful investigations into the action of various substances on the life and multiplication of bacteria by Koch and Wolffhugel and others, the following facts are worthy of note: Corrosive sublimate is the most destructive of all known agents to bacteria. An aqueous solution in proportion of 1 : 20,000 kills the spores of bacilli in ten minutes. A solution of 1 : 5,000 is thus a certain disinfectant, even when the time of exposure is very short. Sulphurous acid does not stand high as a disinfectant; its penetrating powers are very weak. On the whole it may be considered a very untrustworthy disinfectant. Iodine, bromine and chlorine are more powerful than sulphurous acid. Spores are killed in a day by iodine or chlorine water. Carbolic acid in solution 1 : 400 checks the development of bac-

terial spores. At ordinary temperatures the vapor of carbolic acid is without effect. If water is lacking in quantity or nutritive matters are in excess, bacterial development can not progress. This is the reason why condensed milk does not turn sour, and dried or salted meat does not putrefy; why conserves of fruit made with sugar do not ferment. According to the researches of Horwaths and Remks, the multiplication of bacteria is checked by constantly agitating the liquid in which they reside. Another important factor in the development of bacteria is the presence of lower orders of fungi in the nutrient liquid. That higher plants encroach on and interfere with each other is well known, and the fact needs but to be mentioned in passing, so it is possible for bacteria, yeast plants and moulds to compete with each other for existence.—(Naegeli.) Bacteria that are thriving and multiplying in a liquid may be checked and even killed by introducing a fungus that is more at home in the liquid than the bacteria. A struggle for existence is known to occur in all kinds of animal and vegetable life. Micro-bacteria have the power to stop the growth of micrococci. Bacterium termo may kill bacilli when the supply of oxygen is insufficient for both. From what has been written it will be readily seen that heat and moisture are two very important factors in bacterial development. Moisture may be entirely withheld from them, and they will continue to live; heat may also be withheld from them without producing their destruction. We may infer from this that their distribution is exceedingly extensive. In fact we have sufficient evidence for believing that they are very widely diffused through the air, and that they exist in great abundance in all ordinary drinking water, and on the surfaces of all vessels which are not chemically clean. They are known to float through our atmosphere in a dry and lifeless condition in multitudes, and to adhere to all objects exposed to atmospheric influences. If the soil in which they chance to take up their abode proves to be favorable, the moment they alight they burst into prodigious activity; whilst if

they chance to fall upon unfavorable soil, nothing ever is known concerning the intrusion of these micro-organisms. Great varieties of these organisms are known, and they are differentiated by their shape, habits and properties.

Let it be borne in mind that bacteria, like all other living things, do not appear without progenitors, and that spontaneous generation is a farce and not a fact. Every breath we take and every time we swallow, multitudes of these organisms are taken into the system, and were it not for the antiseptic powers of active living tissue, every wound would become putrid, and every breath would admit into our blood death producing germs. When the vitality of a part of the body generally falls below that of the bacteria, their victory is signalled by undesirable and often fatal changes. "As a rule the injurious effects of bacteria are in inverse proportion to the vital power of the textures which they invade." Many cases of this kind are seen by the physician and surgeon. In proof of the above I will give an illustration. Take a person whose vital powers are somewhat reduced by repeated debauch; he falls asleep in the open air, suffering from intoxication and being exposed to the reducing chill of the night, his vital activity becomes so lowered that putrefactive changes may be initiated in his lung tissue. Is not this a common history in the beginning of gangrene of the lung?

In concluding this article I will quote from Prof. Bristowe in favor of the germ theory of disease. "We now come to speak of that important class of causes to which all contagious or infectious diseases owe their origin—causes which are specific for each specific disease; which are material; which pass in some way or other from those already affected to those who are sound and implant themselves in their bodies; which grow and multiply therein at their expense, causing characteristic symptoms; which in a greater or less degree are capable of escaping therefrom, and of then similarly infecting a second series of healthy persons, and so on continually; and of which none (so far as we certainly know) has varied intrinsically

in its effects from the earliest record of its operation up to the present time, or upon any part of the earth's surface. It is at once obvious that these causes are essentially and utterly different from those which have just been discussed, (mechanical and chemical causes.) It is impossible to conceive of the contagiousness of a strictured bowel, an apoplectic clot or an attack of jaundice; it is contrary to all we know of chemistry, that lead or mercury, morphia, or the poison of the cobra, or a dose of medicine should multiply within the system. But here we have poisons or irritants which do multiply in the system, it may be a billion fold, every unit of whose product is as efficient in imparting disease as was the unit from which it sprung. These facts are quite incompatible with any other view of the nature of these causes, than that they are actual living things.

Proceedings of Societies.

THE AMERICAN MEDICAL ASSOCIATION.

The Thirty-sixth Annual Session of the American Medical Association was held at New Orleans, from April 28 to May 1, inclusive.

First Day's Proceedings.—The session was opened by prayer on Tuesday morning. Dr. Samuel Logan, chairman of the Committee on Arrangements, delivered a brief address of welcome.

He eulogized the Association and the great profession which it represents, referred to the last meeting of the Association in this city more than a decade ago; speaking eloquently and reverently of the memory of the great man who did so much to unite the profession after the war, and who, with this end in view, urged the selection of New Orleans for that meeting. By personal efforts also he secured the election of a distinguished Alabamian as President of the Association; his wishes were followed in afterwards electing his pupil, Dr. Richardson, of New Orleans, and also in the choice of the present incumbent,

another distinguished southerner, Dr. H. F. Campbell, of Augusta, Ga.

The ex-Presidents of the Association were invited to take seats upon the platform; Drs. N. S. Davis, of Chicago; T. G. Richardson, of New Orleans; and J. M. Toner, of Washington, complied.

Dr. Campbell delivered the Annual Address of the President. The address began with a glowing tribute to the distinguished members of the profession who had formed the Association, and whose wisdom had guided its deliberations. Congratulating the Association next upon the place selected for meeting, he also spoke in praise of the *Journal* as a great advance over the old form of publishing the proceedings. He referred to the meeting of the International Medical Congress of 1887 as promising great benefit and improvement to the medical profession of this country. The executive officials of these two great trusts, he declared, had faithfully and laboriously brought them to a state of progress assuring of brilliant and permanent results. The remainder of the address was devoted to the consideration of the present unsatisfactory relations of the medical profession to tribunals of law. The low estimate placed upon the value of medical testimony; the fact, according to the common law of England and in many of our own States, that testimony may be extorted from physicians, and the frequency of trials for malpractice, in which the surgeon appears as defendant, are subjects deserving and demanding attention by the members of the Association. In conclusion, he recommended the addition of a section on Forensic Medicine, which should comprehend all the leading questions arising in the several departments of medicine; but besides them, "every question or occasion through which the medical man can be brought into relation with the tribunals of the law, whether as a medical witness, as a medical expert, or as a medical defendant; or in time, when he shall have attained his true dignity as Amicus Curiæ or adviser of the court, his dictum equivalent to conclusive evidence, his scientific wis-

dom worthily rewarded as enlightenment indispensable in the upholding of justice, and his profound and conscientious opinion accepted with the same unquestioning confidence in its integrity as that which is yielded to the judicial ermine and the charges from the bench." In conclusion, he requested that a committee be appointed to consider the expediency of organising a section of Forensic Medicine, than which none could be of higher importance in the present and in the future. In time may we not be able to prophesy of legal medicine, in the words of the now almost mythic Seneca, "The day will come when those things which are now hidden shall be brought to light by true and persevering diligence—when our posterity will wonder that we should have been so ignorant of that which is so obvious."

A vote of thanks was tendered the President for his address, and a committee of five was directed to be appointed to which the suggestion with regard to a section on Forensic Medicine was referred.

Dr. T. G. Richardson, on behalf of Dr. Austin Flint, chairman of the Special Committee appointed at the last meeting for this purpose, read a report embodying a sketch of the professional life of Professor Gross for publication in the Transactions of the Association. It was accepted and referred to the Committee on Publication.

Dr. J. S. Billings presented a special report upon the new fire-proof building for the Army Medical Museum and Library of the Surgeon-General's Office, for which Congress had made an appropriation, and upon which work will begin in a very short time. In behalf of the Medical Department of the Army he returned thanks to the Association for the tokens of confidence and approval manifested by it, in appointing the committee to aid in securing the appropriation.

Dr. Billings also presented the preliminary report of the plan of organisation of the International Medical Congress prepared by the Executive Committee, as instructed at the last meeting of the Association.

On motion of Dr. J. Keller, of Arkansas, the report was made the special order for the succeeding day at twelve o'clock.

A report on the erection of a monument in the city of Washington to Dr. Benjamin Rush, signed by Dr. A. L. Gihon, chairman of committee, was read and made the special order for Friday morning.

Dr. R. A. Kinloch presented a communication from the Medical Association of South Carolina upon the subject of the discovery of the anesthetic properties of ether.

Second Day's Proceedings.—Dr. H. D. Didama, of Syracuse, New York, read the Address in Medicine, which commenced with a reference to cocaine hydro-chlorate and the comma-bacillus, and expressed his belief in the formula, no comma-bacillus, no cholera. Acknowledging the existence of a large class of diseases due to bacteria, he did not think it necessary to agree with the mycologist in his effort to force all diseases into this category. There are disorders arising in the nervous system, or from deficient or defective blood supply, or from diseased cells, as well as from germs, and by the interaction of these morbific influences diseases are produced. Passing from these, the reparative force, the *vis medicatrix naturæ*, the resisting power to disease, and the effects of the varying degrees of these upon the individual, were considered.

Dr. R. S. Sutton, of Pittsburg, chairman of the section on Obstetrics and Diseases of Women, next delivered his address, dwelling chiefly upon the history of ovariotomy, the title being "A Brief Review of the Growth of McDowell's Operation at Danville, Kentucky, in 1809, and its Present Status." The operation on Mrs. Crawford was performed before the days of anesthetics. No antiseptics were used, except the pure air of a border town. No sponges were used on the abdomen, and the pedicle was dropped in after ligaturing. The patient survived the operation thirty years. The next operation was done in 1820. As late as 1862, but one success had been reported in Scotland; that was a patient of Keith. In

the United States, by 1843, eighteen cases had been reported, and in 1863 over three hundred cases had been operated on in this country.

Dr. Sutton showed that out of McDowell's operation had grown all the recent developments of intra-abdominal surgery, and claimed that the deviations from the method of performing the operation of ovariotomy were comparatively unimportant, the most decided being the introduction of the galvano-cautery by Baker Brown, and the cutting short of the ligature, as practised by Nathan Smith. He insisted upon the absolute necessity of surgical cleanliness in the operations, Listerism being the "gospel of cleanliness."

After reviewing the details of the modern operation, he closed with a warm tribute to the memory of Sims, who, like McDowell, had a genius for original investigation.

The construction of a health city in Florida was the subject of a volunteer paper by Dr. W. C. Van Bibber, of Baltimore, the object being to give information with regard to winter resorts for invalids. The benefit of the climate of the Gulf coast of Florida has been demonstrated by experience: he thought if a city uniting medical, social, and scientific interests could be founded in the sub-peninsular portion of Florida, that it would be without a rival as a sanitarium.

DISCUSSION OF REPORT OF COMMITTEE ON THE INTERNATIONAL MEDICAL CONGRESS.

The motion to adopt the report was opposed by Dr. J. V. Shoemaker, on the ground that the committee had exceeded its powers, and had been premature in organising the Congress and in filling the offices. It was also claimed that the committee had failed to recognise men of eminence in the profession in the South and West.

A spirited discussion followed a motion by Dr. Daniels, of Texas, to reject all the officers proposed by the committee, and authorise the Committee on Nominations to make the appointments for the Congress. Finally, an

amendment offered by Dr. Keller, of Arkansas, was substituted for Dr. Daniels' motion:

"*Resolved*, That the Committee appointed by the American Medical Association to arrange for the meeting of the International Medical Congress of 1887 be enlarged by the addition of members from this Association, one from each State and Territory, and from the Army and Navy and the Marine Hospital Service, and the District of Columbia, to be appointed by the present presiding officer, Dr. J. S. Lynch. of Baltimore, First Vice-President; and that this Committee, thus enlarged, shall proceed to review, alter, and amend the action of the present Committee as they may deem best."

An attempt was made to substitute a motion to adopt the report of the committee, by Dr. Saunders, of Tennessee, and was promptly voted down.

Dr. W. A. Byrd, of Quincy, Illinois, amended by moving that members of the committee from States represented at this meeting shall be named by the delegations, and members from the States not represented shall be appointed by the President. Dr. Keller accepted the amendment, and the resolution was carried.

Third Day's Proceedings.—The amendment offered by Dr. Foster Pratt, of Michigan, empowering each section to elect its own officers, was, after discussion, laid upon the table until the next meeting.

Dr. N. S. Davis, chairman of the Standing Committee on Meteorological Conditions and their Relations to the Prevalence of Diseases, presented a report. The report was ordered to be published and the committee continued.

Dr. Davis also reported from the Committee on Collective Investigation of Disease in co-operation with the committee of the British Medical Association.

The report stated that these special investigations into disease were going on in nearly all the European countries, in India, the United States, and South America.

The committee recommended that they be authorised to continue their correspondence with the committee of the British Association and the committee of the Inter-

national Congress, and that the detailed work be carried on by committees appointed by State societies co-operating with the Central Committee and General State Committee. The Central Committee would act as the medium of communication between the local and foreign committees. The recommendation was adopted and referred for publication.

Dr. Davis, as the chairman of a special committee appointed last year to make some declarative interpretation of certain points in the Code of Ethics, submitted a report.

Dr. Duncan Eve, of Nashville, Tennessee, as chairman of the section on Surgery, read an address on recent advances in operative surgery. Special mention was made of the contributions of Dr. H. B. Sands, of New York, on "Internal Œsophagotomy;" Dr. J. H. Packard, of Philadelphia, on "Colotomy;" Dr. F. Lange, of New York, on "The Treatment of Bone Cavities in the Lower End of the Femur;" Drs. Keen and Musser, of Philadelphia, on "Cholecystotomy;" Dr. L. S. Pilcher, on "The Treatment of Wounds," and others. Surgical literature was then reviewed and some recent additions mentioned. The address closed with a touching tribute to the memory of the late Prof. Gross.

The Address on State Medicine, by Dr. E. W. Schauffler, of Missouri, was read by title, and referred. The Treasurer, Dr. R. J. Dunglison, of Philadelphia, presented his annual report, showing a balance on hand of $932,11, with an increase of one hundred and twenty-five new members. The plan adopted last year of admitting members by application had resulted in decidedly increasing the income of the Association.

The report of Dr. Kleinschmidt, of Washington, the Librarian, was ordered to be printed without reading. Dr. J. M. Toner read the report of the Committee on Publication, including the report of the Board of Trustees of the *Journal*.

According to the statement made, the *Journal* is out of debt at the end of its second year, its total income for

1884 having been twenty-one thousand dollars, and the total expenses, excepting editorial, twelve thousand dollars.

The place of publication will continue to be Chicago. The trustees took pleasure in announcing that, at their unanimous and earnest request, Dr. Davis had consented to withdraw his resignation, so positively tendered last year, and to continue as editor-in-chief under certain conditions, which were accepted by the trustees.

Dr. J. B. Roberts, of Philadelphia, offered a resolution from the section on State Medicine, earnestly advocating the establishment in every State and Territory of Boards of Medical Examiners, who shall examine all practitioners, and whose license shall be the only license to practice medicine. Action upon this was deferred until the next morning.

The report of the committee recommending the erection of a monument to Dr. Benjamin Rush, of Philadelphia, in Washington, was read by the Secretary. The report was ordered published and the attached resolution adopted, providing for the appointment of a standing committee on the Rush Monument, which is to be built by means of a fund made up of subscriptions of one dollar each from the physicians of the United States and such additional donations as may be made.

The following committee was named: Drs. A. L. Gihon, Washington; Henry H. Smith, Philadelphia; R. A. Kinloch, Charleston; S. C. Gordon, Portland, Maine; George H. Rohé, of Baltimore; J. H. Murphy, of St. Paul; and Morris H. Henry, of New York.

Dr. Kinloch, for the Committee on Nominations, reported the following officers for election:

President.—Dr. William Brodie, of Michigan.

First Vice-President.—Dr. Samuel Logan, of Louisiana.

Second Vice-President.—Dr. A. Y. P. Garnett, of District of Columbia.

Third Vice-President.—Dr. Charles Alexander, of Wisconsin.

Fourth Vice-President.—Dr. W. F. Peck, of Iowa.

Secretary.—Dr. W. B. Atkinson, of Philadelphia.

Treasurer.—Dr. R. J. Dunglison, of Philadelphia.

Librarian.—Dr. C. H. A. Kleinschmidt, of Washington, D. C.

St. Louis was recommended as the place of meeting, and the time for the assembling of the next annual session, the first Tuesday in May, 1886.

On motion, the report was adopted, and the candidates elected for the respective offices named.

Fourth Day's Proceedings.—The Vice-President occupied the chair in the absence of the President.

The Secretary read the names of the additional members of the committee on arrangements for International Congress.

On motion of Dr. Reed, a resolution was adopted appointing a special committee of three to devise a plan for awarding honors, in accordance with a previous motion, for papers read before the different sections at the next meeting of the Association.

The resolution of Dr. Roberts, submitted yesterday by the section on State Medicine, etc., was taken up and adopted, recommending that steps be taken to establish in each State Boards of Examiners of Medical Licenses, whose certificates shall be the only authority to practice medicine in those States.

A resolution by Dr. Keller that, in the near future, if not now, cremation will become a sanitary need in the cities, was referred to a special committee, to report at next meeting.

Dr. J. A. White, of Richmond, Virginia, chairman of the section on Ophthalmology, Otology and Laryngology, delivered an address, in which he reviewed recent progress in these branches. He devoted considerable space to a statement of the great value of cocaine in operating upon the eyes, nose and throat.

Dr. J. H. Pope, of Texas, chairman of the section on Diseases of Children, made a verbal communication giving the substance of his paper, summing up the advances made in the treatment of diseases of children.

No report was received from the chairman of the section on Oral and Dental Surgery, Dr. W. W. Allport, of Illinois, who was absent. The chairman was authorised to send his report to the Publication Committee.

The Special Committee upon the President's Address presented a report recommending the organisation of a section on Forensic Medicine. By resolution, action was deferred upon it until next meeting, it being in the nature of an amendment.

A resolution was passed thanking the Committee on Arrangements, medical profession of New Orleans, the clergy, Dr. and Mrs. T. G. Richardson, Mr. and Mrs. Cartwright Eustis, New Louisiana Jockey Club, and the citizens of New Orleans, for their hospitalities.

Dr. William Brodie, of Michigan, the President-elect, was escorted to the chair by ex-Presidents Drs. Toner and T. G. Richardson. In taking the chair, Dr. Brodie made some appropriate remarks, thanking the Association for the honor conferred upon him.

Analects.

LEVIS' METALLIC SPLINTS, FOR FRACTURE OF LOWER END OF THE RADIUS.

The correct nature and mechanism of the ordinary form of fracture of the lower end of the radius is now, after much controversy, generally admitted and properly comprehended. With this proper understanding the indications of treatment become rational and decisive.

In the usual and very characteristic fracture of the carpal end of the radius the primary line of the fracture is, with little tendency to deviation, *transverse* in direction. Associated lines of fracture are generally those of comminution of the lower fragment, and are caused by the upper fragment being driven vertically into it and splitting it, usually in directions toward its articular surface.

The displacement of the lower fragment is toward the dorsal aspect of the forearm, and its articular surface is inclined in the same direction, abnormally presenting backward and upward.

The mechanism of the fracture is its production by falls upon the palm of the hand, which, with the carpus, undergoes extreme extension, and the fracture is caused by an *act of leverage* or *transverse strain.* This direction of force has also been called *cross-breaking strain.*

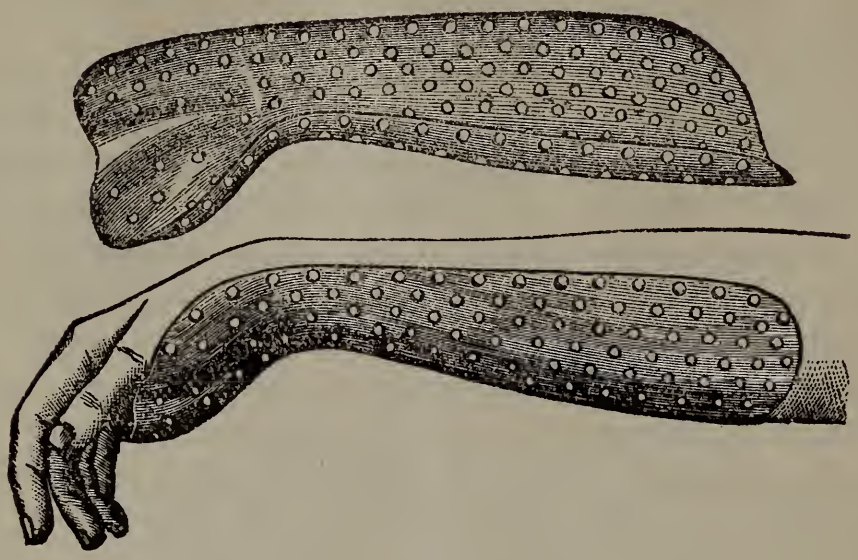
In this fracture, actual displacement of the lower fragment may not exist at all, or it may be to the extent of complete separation from contact of the broken surfaces, varying with the amount of force applied and with the retaining influence of the surrounding dense structures.

The first essential of the treatment of fracture of the lower end of the radius is *the complete reduction of the displacement.* The action of replacement must be directed to the lower fragment itself. The reduction of the fracture can usually be thoroughly effected, under anesthesia, by *strong extension applied to the hand, associated with forced flexion of the wrist, and with pressure applied directly on the dorsal surface of the lower fragment.* Unless vertical splitting or comminution of the lower fragments exists, the maintaining of partial flexion of the wrist, with pressure of a pad on the dorsal surface of the fragment, will prevent return of deformity.

With the object of retaining the apposition of the fractured surfaces, by overcoming displacing forces, I have practiced for many years on the principles involved in the splint here illustrated, the application of which will not require much description.

In the treatment of fracture of the lower end of the radius it is essential that proper allowance be made for the curvature of the anterior or palmar surface of this part of the bone. This is insured in the splint which I have devised, which follows correctly the radial curvature ; and the fixing of the thenar and hypothenar eminences of the hand in their moulded beds, maintains the

splint immovably in its correct position with reference to the radial curve.



To neglect of complete primary reduction of the displacement of the lower fragment, and to inefficient restoration and retention of the normal radial curve, are due the frequent unfortunate sequences of this fracture.

The splint is made of copper, so as to be readily conformable by bending to suit the peculiarities of size and form of forearms. The slight roughness left on back of splint from perforations is for the purpose of keeping the bandage from slipping. It is nickel-plated to prevent oxidation.

The splint will usually fit the forearm so accurately that but little padding will be required, and a piece of woven lint, or of cotton or woolen flannel is all that is necessary for its lining. No dorsal splint is needed, but, as before referred to, a small pad will, in most cases, be required over the dorsal surface of the lower fragment. For retention of the splint an ordinary bandage, two inches and a-half to three inches wide; is all that is necessary.

The splint has the merits of being applicable to all cases of fracture of the lower end of the radius, and also to many other injuries involving the forearm and wrist, and, as now supplied, is very inexpensive.—*R. J. Levis.*

Editorial.

THE MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

The Eighty-seventh Annual Convention of the Medical and Chirurgical Faculty of Maryland was held in this city from May 12th to 16th, inclusive. The work accomplished compares very favorably with that done in preceding years, or by other State associations.

The address of the President, Prof. Thos. S. Latimer, gave an admirable resumé of the history, causes and prevention of Asiatic cholera.

The Treasurer's report shows a debt of $99.55, which is a considerable reduction from the liabilities at the last annual report. The debt will doubtless be wiped out during the current year.

The library committee reported an increase of 151 volumes during the year. Sixty-four journals are regularly received.

The annual oration was delivered by Prof. H. Newell Martin, of Johns Hopkins University, upon the Physiological Action of Drugs. Incidentally, the address was a defense of vivisection.

Dr. R. W. Johnston read the report of the Section on Surgery. He discussed the relative claims of chloroform and ether as anesthetics, and declared himself unreservedly in favor of the latter. He also referred to surgical dressings, cerebral, thoracic and abdominal surgery, calling especial attention to the cases of Godlee (trephining for cerebral tumor,) W. T. Bull (multiple suture of intestine for gunshot wound,) Winslow (excision of the pylorus,) and Tiffany (nephrolithotomy.)

The Section on Obstetrics and Gynecology reported through Drs. John Morris and L. E. Neale. Dr. Morris reviewed the history of gynecology during the past year under the following heads: 1, constitutional treatment of uterine disease; 2, pessaries; 3, incision of the cervix uteri and the use of tents; 4, Emmet's operation for lacerated cervix; 5, lacerations of the urethra; 6, oper-

ations for lacerated perineum; 7, the Alexander-Adams operation on the round ligaments; 8, extirpation of the uterus for cancer; 9, extra-uterine pregnancy; 10, therapeutics in gynecology.

The progress in the obstetrical art was discussed at considerable length by Dr. Neale, who, after exhibiting a new axis-traction forceps, and demonstrating Schultze's method of artificial respiration in asphyxiated infants, explained the method of abdominal palpation in the diagnosis of pregnancy.

Prof. J. S. Lynch reported, from the section on Practice of Medicine, his experience with antipyrin in fevers. The dose is 8–15 grains, repeated every 3–4 hours until the temperature is reduced. Prof. Lynch regards this remedy as much superior in antipyretic value to quinine. It sometimes produces an itching erythematous eruption.

Prof. Brinton reported from the Section on Pathology, giving a clear summary of the progress in pathology during the year, considering especially the comma-bacillus of Koch, the micrococcus of pneumonia of Friedlander, the bacillus of typhoid fever, and Lustgarten's bacillus of syphilis.

The Section on Sanitary Science presented three papers; one by the chairman, Dr. W. C. Van Bibber, on the Tonic Effects of Travel; one by Dr. George H. Rohé, on The Non-Necessity of any Radical Change in the present system of Disposal of the Dead, and one by Dr. Jas. Carey Thomas on the Study of Hygiene in Medical Schools. The great importance of this study to physicians was pointed out by Dr. Thomas.

Dr. J. S. Conrad made the report from the Section on Psychology, criticising the prevalent method of management of the insane. This gave rise to a lively discussion. The views of the reporter did not gain much approval.

Volunteer papers were read by Dr. D. W. Cathell on Rectal Medication; Dr. F. Donaldson, Sr., on the Use of Muriate of Cocaine in Diseases of the Nose and Throat; Dr. R. Winslow on Laparotomy for Gunshot and Perfor-

ating Wounds of the Abdomen; Dr. J. N. MacKenzie on the Origin and Cure of Hay Fever; Dr. C. O'Donovan, Jr., on Five Cases of Ovariotomy, Dr. J. H. Branham on the Treatment of Stricture of the Urethra, with cases and specimens; Dr. D. Stewart on Carbon as an Antiseptic Dressing, and Dr. W. S. Maxwell on a Case of Pericolitis from Perforation of the Bowel.

Reports of Special Committees were read by Dr. Geo. H. Boyland on the Regulation of the Sale of Potent Drugs; Dr. George H. Rohé on the Relations of the Medical Profession to Certain Sanitary Needs of the community, and by Dr. T. B. Brune on the Directory of Nurses.

The Faculty fitly closed its work by the election of Dr. John R. Quinan as President for the current year. Dr. Quinan has in the past rendered such distinguished service to the Faculty, that his elevation to the dignity of presiding officer was an appropriate recognition of his labors.

Current Literature.

Modern Therapeutics of the Diseases of Children. By Joseph F. Edwards, M.D., author of "Bright's Disease and its Treatment," etc. Philadelphia: D. G. Brinton, 1885.

This is one of those eclectic compilations of which "collections of formulæ," "favorite prescriptions," etc., are samples. Fair diligence, some judgment in selecting, a good pair of scissors, a paste pot, a few books and a file of medical journals are all the requisites necessary to prepare such a book. The one under notice is an average specimen of the class. The views of 398 different authors are represented by 366 prescriptions and articles on 96 diseases. Our opinion of the book can be briefly expressed in the words of the late Mr. Lincoln: "For people who like that sort of thing, that's just the sort of thing they would like."

The Oleates. An Investigation into their Nature and Action. By John V. Shoemaker, A.M., M.D., Lecturer on Dermatology at the Jefferson Medical College, etc. Philadelphia: F. A. Davis, Att'y, 1885.

In this little volume Dr. Shoemaker has collected nearly everything worth knowing about these compounds, their nature and therapeutic applications. The oleates of copper, lead, mercury and zinc appear to be valuable preparations in the treatment of various skin diseases. Of most of the others, however, little of a definite character is known.

Flotsam.

EVEN the poor, despised "Stye in the eye" is said to be due to a special micrococcus.

THE accounts of protective inoculations against cholera as practised by Dr. Ferran in Spain, do not inspire much confidence.

JOHNSON'S revolving book-case (See advertisement) can be ordered through the CHRONICLE. Cash must always accompany the order.

SOME of our highly ethical contemporaries are publishing the advertisement of "Duffy's Malt Whiskey." This nostrum is twin brother to St. Jacob's Oil, Red Star Cough Cure and Petzold's Bitters, and is advertised in the most shameless manner by its proprietors.

RAILROAD tickets to the Thomas Wilson Sanitarium for Sick Children will be distributed by Drs. W. H. Norris, 154 E. Baltimore St.; A. V. Gosweiler, 96 South Ann St.; E. B. Fenby, N. E. Cor. Eden and Biddle Sts. E. E. Mackenzie, 69 Franklin St.; J. G. Huck, Cor. Argyle Ave. and Townsend St.; Geo. Thomas, 656 Pennsylvania Ave.; E. S. Conlyn, 244 Madison Ave.; Geo. R. Graham, 136 Columbia Ave.; R. H. P. Ellis, Cor. Light and Hamburg Sts.,

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MEDICAL CHRONICLE.

BALTIMORE, JUNE, 1885.

Original Articles.

ARTICLE I.

NOTES ON THE USES OF MURIATE OF COCAINE IN GYNECOLOGICAL PRACTICE.*

By J. H. SCARFF, M. D., Prof. of Gynecology, Baltimore Medical College.

Since the discovery of the anesthetic properties of cocaine when applied to mucous membranes, its use has been confined, principally, to surgery of the eye, but recently its beneficial effects have extended to other parts of the body. To-night I will attempt to give a summary of my personal experience with the drug in gynecological practice, and how it can be applied. The following cases are taken from my note book and serve as the basis of this paper.

Case 1. Mrs. M———, aet 36, of Dorchester County, Maryland, came to this city February 16, seeking relief from a most agonizing pain situated in the region of the genito-urinary organs. I found her very much emaciated, with a careworn expression and fully convinced that she was the victim of some malignant disease, which conviction was partly induced by the opinion of her former medical attendant.

She said that about two years ago she began to suffer with a burning sensation at the neck of the bladder when voiding urine, and this gradually increased until it became unbearable and her attending physician was compelled to resort to the use of opiates in large doses in or-

*Read before the Baltimore Medical Association.

der to secure her any rest. Cohabitation was so painful that she had been compelled to resist it for may months, and symptoms of utero-vaginal disturbance gradually made their appearance.

From this history, I, too, was of the opinion that I had cancer to deal with, but after an examination of the genito-urinary organs I found the uterus a little larger than normal, slightly retroverted, neck soft, smooth and regular and movable in any direction and not over sensitive. A glairy mucus exuding from the os indicated some cervical catarrh. The bladder was found to be very sensitive and as the finger was slowly brought along the under surface of the urethra the sensitiveness increased until approaching the orifice of the urethra where it became unbearable. An examination at this point revealed, protruding from the orifice, a large urethral caruncle.

In order to examine more fully into the extent of the caruncle I applied ten drops of a four per-cent solution of cocaine and left, promising to return in a short while, which I did, and applied ten drops more. After fifteen minutes had elapsed I found the tumor still sensitive but comparatively benumbed. I went to Mr. Jennings and had prepared an 8 per cent. solution and of this I applied about eight drops repeating it again in fifteen minutes. Shortly after the last application I could manipulate the growth in any way without producing pain and grasping it with a pair of volsella forceps clipped it off with the knife of the thermo-cautery. After a few weeks of constitutional treatment the patient returned home much improved in health and an entire absence of pain.

Case 2. Mrs. B——, of this city, aet 39, sent for me March 3rd. She had been complaining for the last 3 or 4 months with a scalding pain when voiding urine and it had so increased that she could not walk without straddling her legs and would put off voiding urine as long as possible as she said the pain when passing the last few drops was indescribable. An examination of the urethra revealed an ordinary sized sessile caruncle, just

beyond the orifice of the urethra. It was extremely painful and would bleed upon the slightest touch. Ten drops of the 8 per cent. solution were applied over and around it and in twenty minutes ten drops more. Waiting fifteen minutes longer a third application of ten drops was made and shortly afterwards I was enabled to remove the growth with a pair of curved scissors, sear the denuded surface with the blade of the thermo-cautery and bring the edges of the mucous membrane together with two fine cat-gut sutures, all the while the patient giving no evidence of pain.

These cases are alone sufficient to show the wonderful anesthetic properties of the drug, as you all well know how exquisitely sensitive are urethral carunculæ, even so much so, that it is hardly possible to benumb the sensibility with either chloroform or ether without approaching too near the border line between life and death. I have tried the cocaine in various ailments of the uterus and vagina and in many cases with good success. A few of these I relate.

Case 3. Miss M——, aet 21, consulted me in January with the following train of symptoms. Reflex nervous manifestations, back-ache, dragging sensation in the pelvis with rectal tenesmus, ovarian pains on left side, leucorrhœa and aggravated dysmenorrhœa. She had so brooded over her troubles that life was fast becoming a burden to her. Having taken medicine for several months without any relief, her mother, who accompanied her to my office, desired that an examination should be made and if possible ascertain the true state of affairs. Upon attempting to introduce the finger into the vagina great pain was experienced and the resistance of the sphincter muscles showed a high degree of vaginismus. Finally succeeding, I found the os presenting at the ostium vaginæ. Uterus lying in hollow of the sacrum and acutely retroflexed and very sensitive. The cause was at once apparent. Removing my finger I attempted the introduction of a small sized bivalve speculum. This gave much pain and any attempt to separate the blades was

strongly resisted by the vaginismus, and produced intense pain. I concluded to have her return to her home and at some appointed time I would administer chloroform, replace the uterus and introduce a tent. She having had a friend succumb to chloroform in the hands of a well known homœopathist of this city only a few days previous, neither she nor her mother would listen to any argument for its use. I now concluded to give cocaine a trial and if possible overcome the vaginismus and benumb the very sensitive condition of the uterus. I was at a loss to know how to apply it to keep up a prolonged effect, fearing that the watery solution would be too transient.

Having heard of the oleate made by McKesson & Robbins, I concluded this would be the most suitable way to use it. I therefore had made by Jennings an 8 per cent. strength of oleate, and to this I added a sufficient quantity of glycerine to make it a semifluid substance. Introducing a small cylindrical speculum into the vagina, I each day for four days made an application to the vaginal walls and uterus; the fifth day I could easily replace the uterus, introduced a tent, removing it the next day and introducing a pessary. She is to day relieved of all her disagreeable symptoms and pain, and is above all a grateful patient.

Case 4. Mrs. M——, of this city, aet 51, passed menopause, consulted me April 13th, with the following history. Five years ago, and just at the beginning of her climacteric period she noticed a small tumor in the left labium majus. It has constantly grown, but not rapidly, until now it was gained the sized of an egg and is somewhat painful. Upon examination I thought it to be a fibroid and a section of it, after removal proved it to be such with some calcareous deposits imbedded here and there through it. She desired its removal, and three days afterward was appointed for the operation. In the meantime I had daily applied a 4 per cent. strength of cocaine oleate to the mucous membrane lining the tumor. Thursday the vagina was well washed with

carbolised water, all remains of the oleate removed from the tumor and ten minims of the 4 per cent. solution were applied. In conjunction with this five minims were hypodermatically injected into the adipose tissue closely surrounding the tumor. Fifteen minutes later ten to fifteen minims more were applied to the mucous membrane and its removal began. An incision through the mucous membrane, longitudinally over the tumor, was made and it was removed. When interrogated as to pain, she said it hurt a little, but not as much as the hypodermic needle.

Case 5. Mrs. C——, aet 28. I was called to see her May 4th, and found that six months ago she had had peri-rectal abscess, which resulted in fistula in ano. Examination revealed a fistulous opening one inch and a half from anus, probe passed and entered rectum through an opening from two and a half to three inches above external sphincter. I advised an operation to which she consented and the following day was appointed. I ordered bowels to be moved both by a laxative and enema. Before operation next day the lower part of bowel was cleansed with carbolised water as was also the fistulous track, ten minims of the 4 per cent solution of the muriate were introduced into the fistula and four minims hypodermatically injected into the tissue through which the incision was to be made. After fifteen minutes five minims were again put in opening, and a grooved director passed and a clean cut made severing the external sphincter muscle. She flinched some but when asked if it gave her much pain, said: "Oh! not much." The opening was filled with a pledget of iodoform gauze, iodoform dusted over the surface, a pledget of borated cotton applied and this covered with oakum. When applying the bandage she said in a most surprised manner, "You have not done the operation have you"? when I gave her an affirmative answer she remarked, "If I had known that was all I would not have suffered as I did all winter".

I have given these cases with as much precision as possible, avoiding all untimely eulogies, that often accom-

pany a new medicine into the physician's armamentarium and there to remain in many cases only till clinical experience presents its objectionable features and failures heretofore unnoted. Surely, in the cases I have related, cocaine has proved itself a most valuable agent and while in two of the cases there might have been considerable pain, yet neither gave to any extent evidences of it. I feel that as we become better acquainted with it and know how to properly apply it, it will prove itself a much more valuable agent in conquering pain and avoiding the danger from anesthetics by inhalation.

A word regarding the constitutional effects of cocaine. In the case where five minims were given hypodermatically there was soon felt giddiness, dimness of vision with dilated pupils, nausea and profuse sweating. She was ordered a mixture containing ammonia, brandy and digitalis and after three or four doses were given the patient soon returned to her wonted condition. In second case of hypodermatic use, the pupils were dilated and some nausea supervened.

ARTICLE II.

TWO CASES OF SEVERE GUNSHOT INJURY.

By J. H. BRANHAM, Surgeon to Bay View Hospital.

Case 1.—A. D., white male, age 14, in March, 1884, while crossing a fence with a loaded gun in his hand, fell, and striking the gun it was discharged, the contents entering the left arm below the shoulder, passing upward and backward, carried away a large part of the head of the bone, the end of the acromion process, completely destroyed the joint and cut the dettoid in two.

The accident occurred near the patient's home, several miles from the city. A physician was called who cleaned the wound, removing shot, wadding and pieces of clothing. It was afterwards dressed with carbolised solution.

I first saw the patient two weeks after the accident. At that time the wound was covered with unhealthy gran-

ulations; the patient was very weak and the febrile symptoms were marked.

He had a severe bronchorrhœa, and his cough was constant and troublesome.

Underneath the pectoralis major muscle was an immense abscess, which was limited below by the fascia at its lower border, and above extended beneath the skin in front of the clavicle into the supra-clavicular space. On the next day this was opened at its lowest point and a drainage tube inserted. The wound was washed twice a day with carbolised solution and the patient began to improve at once. A small abscess formed half way down the anterior aspect of his arm and was opened by Dr. Erichsen. The patient moved to town about four weeks after I first saw him, and was subsequently entirely under my care. Several pieces of bone were removed, and the wound healed entirely in about six months.

Notwithstanding immobility of the shoulder the patient has a fairly useful arm.

The interesting features here are the comparatively good result in a very ugly and extensive wound, and the wonderful benefit of free drainage.

Case 2.—Wm. H., colored, age 26, on December 23, 1884, was wounded by a ball from a large-sized Colt's revolver. It passed through the left femur, about four inches below the trochanters, shattering the bone to a great extent.

The patient was in a garret, entirely without comfort and almost without attendance. He was urged to enter a hospital but refused. His leg was placed in a straight splint, but the patient was restless and soon loosened the bandages. He was then put in a Smith's anterior apparatus but this could not be kept on.

The wound suppurated freely and an incision was made about the 8th day, and the bullet found just in front of the bone, where it had lodged after passing through; it was extracted. The bone was found completely shattered for about six inches. The splinters were firmly adherent

and could not be removed. A second opening was made higher up and a tent passed through.

The limb was then encased in a thick plaster splint, and when this was removed, two months afterward, the bone had firmly united. There is still considerable discharge and dead bone is present, but the patient is able to sit up and is well nourished, and the limb requires no support.

As soon as his consent can be obtained I intend to remove the necrosed bone.

I report this case to show the great usefulness of the plaster of Paris splint. The wound was dressed, syringed and disinfected for two months, but the splint remained firm.

ARTICLE III.

FOREIGN BODY IN THE RECTUM.

By F. C. BRESSLER, M. D., Asst. Resident Physician, City Hospital, Baltimore, Md.

J. W. D., applied at City Hospital Dispensary complaining of "piles." He stated that he suffered intense pain in the region of the anus. He had applied to several physicians for treatment, but none of them made a physical examination, and no relief was obtained from the remedies (ointment) prescribed. On examining the anal region no hemorrhoids could be seen, but there was some firm infiltration on the right side of the anus. The infiltrated spot was very sensitive, and the patient said that the pain caused by an evacuation of the bowels was almost unbearable.

After oiling my finger and introducing it through the sphincter which seemed to cause the most intense suffering nothing was discovered for a time, which could have given rise to the trouble. Persevering in the exploration, however, I finally reached high up in the rectum a slender obstruction placed transversely across the bowel, its ends firmly imbedded in the mucous membrane. The body was supposed by myself, and several other physicians who examined the case, to be a pin. Considerable diffi-

culty was presented to its removal, on account of its situation, (almost beyond reach of the finger), and its firm fixation in the bowel. The body was finally removed by Dr. Clark, and turned out to be, not a pin, but a piece of the stem of a raisin. It was about 1¼ inches long, and nearly a line in thickness. On further examination another small fragment was found and removed without difficulty.

The removal of these obstructions gave the patient great relief, but he returned two days later complaining of intense pain in the rectum, great vesical tenesmus, nervousness, accelerated pulse, and fever. The pain was very violent on the slightest attempt to evacuate the bowels. The tissues about the anus were infiltrated and extremely sensitive. He was put to bed and a poultice applied. Internally he was ordered iron, quinine and bromide of potassium. An enema produced such severe pain and tenesmus as to call for the insertion of opium suppositories. Two days afterward, fluctuation was discovered, and the abscess opened, cutting through the sphincter into the rectum. The operation gave instance relief. The wound was dressed with iodoform and dry lint, and in a week the patient was discharged.

The case illustrates the severe symptoms that may be caused by a very slight obstruction in the rectum, and also shows the necessity of careful physical exploration of this organ in all cases in which it is the seat of disease.

Analects.

COCAINE IN GENERAL PRACTICE.

In cases of minor surgery involving the mucous membranes which are sufficiently painful to call for an analgesic, but do not warrant the induction of constitutional anæsthesia, cocaine fills up a longfelt gap. Its value is enhanced in case of a direct contra-indication of both ether and chloroform, as in heart disease or in patients of

very tender age. Its action on the skin not denuded of the epidermis being of course but very slight, it has to be used hypodermically to obtain any decided effect, though when so employed a sufficient number of trials, both in private and in hospital practice, vouch for the promptness and constancy of the remedy. In a case of phlegmonous inflammation of the hand requiring several incisions, Dr. Burke found the subcutaneous injection of ten drops of a twenty per cent. solution of the hydrochlorate of cocaine to exempt the operation from any pain; Dr. Wilson also rendered the operation of extirpation of an adenoma perfectly painless by a previous hypodermic injection of cocaine (*N. Y. Med. Journal*, November 29, 1884, *N. Y. Med. Record*, November 22, 1884). So, too, Dr. Croston reports having removed an epithelioma of the cheek* without causing more than slight pain after using three injections, consisting each of four drops of a four per cent. solution, of the hydrochlorate of cocaine (*Boston Med. Surg. Journal*, December 11, 1884). To determine the extent of surface rendered insensible by the subcutaneous use of cocaine, Drs. Hall and Halstead made several interesting experimental trials with the remedy, and found the zone of anesthesia produced by a hypodermic injection to extend two to three inches from the point of injection. They also noted vertigo, nausea, cold sweats and dilatation of the pupils accompanying its exhibition, and justly concluded that cocaine exerted a toxic influence upon the central nervous system (*Deutsche Medizinal Zeitung*, No. 7, 1885).

In cases of dental surgery of the most varied description the drug has rapidly gained a high reputation. In extensive burns and scalds cocaine has no rival in almost instantaneously subduing the usually very intense pains. Dr. Adelbert Weiss of Vienna, being called to attend a gentleman severely scalded in the face by an explosion, ordered, after temporary application of oiled rags and ice, the well known mixture of aqua calcis and oleum lini, and at the same time a two per cent. solution of hydro-

*We have had the same gratifying experience in a similar operation. Ed. Chronicle.

chlorate of cocaine. The pains were so agonising that convulsions were feared, since the pains could not be mitigated by the constantly renewed ice application. The very moment that the scalded parts, partly progressed to vesication, were touched by the brush dipped into the cocaine solutions, the pains disappeared as if blown away, and did not return. *Wiener Med. Wochenschrift*, January 3, 1885).

Equally instantaneous is the relief which cocaine gives in hemorrhoids, in anal fissure, in fact, in all affections of the rectum and anus. Dr. Krause praises the beneficent services of the drug in the painful dysphagia of tubercular patients. (*Gazette Medicale de Paris*, January 31, 1885.)

In persistent vomiting of pregnancy the drug was successfully exhibited by Dr. Holz in ten-drop doses of a three per cent. solution, repeated three times at an interval of twenty-four hours, producing the entire cessation of this grave symptom.

In otology, cocaine seems to render no lesser service than in ophthalmology. The experiences of Jellinek, Schrœter, Schnitzler and Stœrk regarding the indications for the use of cocaine in otological practice, are fully corroborated by Zaufal. (*Centralbl. f. d. ges. Therapie*, February, 1885.)

The principle indications for its use are otitis external, to produce anesthesia of the external auditory canal; operations on the tympanic membrane, paracentesis, galvano-cautery, plastic operations; in myringtis, otitis-media and chronic catarrh. In tinnitus aurium Zaufal obtained encouraging results with an instillation of four drops of a two per cent. solution of the hydrochlorate of cocaine. This observer also calls attention to the fact that cocaine is capable of reducing and preventing hyperemia at the points in which it comes in contact with the tympanic membrane, and hence he thinks the drug is possessed of a vaso-inhibitory power.

In affections of the urino-genital organs, cocaine has also been advantageously employed. Its uses in obstet-

rical practice have not yet been sufficiently studied to obtain a just conception of its value, though it is certain that it is very serviceable in the pain produced by the tension of the perineum and the dilatation of the os. Dr. Cabot, of Boston, has used cocaine in an operation for phimosis, and found it to give satisfactory results. The researches of Dr. Blemenfeld showed that a complete urethral anesthesia, extending to the posterior limit of the prostatic portion, might be induced by an injection of a quantity of a two per cent. solution of cocaine. Solutions intended for the urethra ought to be prepared without alcohol (*Deutsche Med. Wochenschr*, No. 50, 1884). The indications for the use of cocaine for the urethra are, endoscopic explorations, operations for retention of urine, catheterisation in cases of irritable urethra, prostatitis and lithotripsis.

That in vaginismus the drug is highly useful, is acknowledged by all observers. Dr. Cazin, of Brooklyn, reports a case of vaginismus of six years standing, which was easily cured with the aid of cocaine. So also the use of the speculum can be rendered painless by a previous application of cocaine.

Dr. Bettelheim recommends its use in tenesmus of the sphincter ani and recti, the effect being instantaneous, though of little permanence.

There is apparently no limit to the sphere of usefulness of cocaine. It is also postively serviceable in all affections and operations on the larynx, and in various forms of neuralgia. Dr. Murel found it to bring prompt relief in certain forms of neuralgia, when administered either by an hypodermic injection, or, preferably, by frictions on the seat of the pain.—*Ther. Gazette.*

[We have used cocaine (four per cent. solution) with success in reducing the severe pain produced in removing ingrowing eye-lashes, by means of electrolysis. Ed. Chronicle.]

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RESULTS OF OPERATIVE TREATMENT FOR EPITHELIOMA.

Dr. C. Patsch, in a recent work, gives the results of his experience with epitheliomata in his surgical clinic, especially with the view of showing what changes in results treatment has accomplished in the last few years, since antiseptics have been used in their removal. His tables so far give the results of cases of carcinoma of the lip and external genitals operated upon between 1875 and 1882.

This work represents but a small portion of what the author has in contemplation: that is, the analysis of 570 cases of cancer of all parts of the body, operated upon between 1875 and 1882, and the condition of these patients at the end of March, 1884.

Cancer of the lip was observed in 98 cases; 88 were men and 10 women, more than the usual percentage of female cases. In only 2 cases did it occur in the upper lip.

The average age of these patients when they presented themselves at the clinic was 57.3 years, and most of them had suffered a year or longer; 22 patients had suffered but half a year. Half of the entire number had infected glands when they came under treatment.

The disease began in most cases between the 50th and 51st year, more seldom between 60 and 80, and only twice between 25 and 30 years.

73 per cent. of the men were exposed by their occupations to "wind and weather." Thiersch has also observed the disease to arise frequently under such circumstances.

Tobacco-smoking had but little influence in its production. In 12.2 per cent. of the cases it certainly arose from an injury to the lip. Many times the cancer was preceded by a suppurating wound. One patient had his lips wounded in the extraction of a tooth; this was immediately followed by a cancerous tumor, which had to be removed eight weeks later, but in spite of the early operation he soon succumbed to a return of the disease.

In some cases operation was refused, as the base of the

mouth and the root of the tongue had become involved.

Four died soon after the operation; 8.3 per cent. later, from intercurrent disease; and 32.2 per cent. from a return of the cancer. Metastasis into the internal organs was not observed. The first return generally occurred between one and two years. If this was removed it generally returned again in a few months; a third operation was usually immediately followed by a reappearance of the cancer.

In March, 1884, four of these patients were living with a secondary cancer; death had occurred in 28 cases, in the average period of 17.1 months after the first operation. Some of these patients had had a second operation performed, and they died 13.6 months, on the average, after the last operation. The average duration of life after the first appearance of the cancer was 3.72 years.

There were living without any return of the disease 35.4 per cent.; five were still sick, as the removal had been followed by an extensive plastic operation. Six patients has remained free from disease between five and six years, and 8 patients were still without return, though from seven to nine years had elasped since the operation. On the average, 29 per cent. of those operated upon had remained free from the disease more than three years, and 10.4 per cent. between one and two years. We only speak of a cure when three years have passed since the operation. In four cases the glandular involvement began only between two and two and a half years.

The prognosis in extirpation of the lip for cancer is moderately favorable, except where there is infiltration of the jaws or of the glands, especially so when a secondary operation is the one under consideration. From the study of the clinical history of these cases the author finds that the period of lymphatic involvement depends more upon the character of the original growth than upon its duration.

The history of four cases is worthy of mention. In two the disease invaded the lower jaw, filled the alveolar canal, and pressed upon the mental and alveolar nerves. The other two cases had remained free from disease for eight

and ten years after operation before a new malignant growth appeared.

Cancer of the penis was observed in 21 cases, nearly always between 40 and 60 years, once only between 20 and 30 years. Twice there was a congential phimosis, and three times the disease was of traumatic origin.

Most of the growths sprang from the sulcus coronarius glandis, a few from the præputium. One case of direct infection from the prepuce to the contiguous head of the penis by a sort of vaccination is noted. Most of the cases presenting themselves were of long standing, and many of them had glandular involvement.

In one case a great thickening of the dorsal lymphatics could readily be perceived.

In some cases where there was decided glandular involvement a simple amputation of the penis without extirpating the glands sufficed for a cure; the glands decreased in size and did not afterwards become carcinomatous.

Amputation was performed as soon as the head of the penis became involved; the compression of the vessels was trusted during the operation to the fingers of an assistant; the hemorrhage from the corpora cavernosa was controlled by deep stitches after the mucous membrane of the urethra had been stitched to the skin.

Two patients died from the operation, one from blood-poisoning; 17.6 per cent. remained healed at the time of making the report. Some cases had a return of the disease after an immunity of from two and a half to three years. The secondary operations were usually unsuccessful. Nine cases in which the disease returned died, on an average, in 13.2 months, from inanition, hemorrhage, etc.

Carcinoma of the vulva was observed in nine cases, the average being 47.1 years; one patient was only 27 years old. In three cases it had existed for one year; in one case a small nodule had been present for eight years. The disease appeared mostly on the inner side of the labia majora, and on the posterior commissure.

Two cases were past operative procedure; one patient

operated upon is now free from disease for three years; two died from recurrence, and one from some intercurrent disease. The author warns against the use of iodoform in patients who use stimulants to excess.—*Phil. Med. Times.*

AN OBSTETRICAL BAG AND CONTENTS.

The pouch is made somewhat of the form of a club bag, with solid metal sides to avoid crushing the contents, and can be easily obtained. It is long enough to contain the Elliot or any of the long forceps, and is divided, when open, into two compartments. The whole, when closed, is easily carried and not cumbersome.

The contents are as follows: on one side two pairs of forceps, long and short. My own contains the Elliot long and the Sawyer short; a pair of scissors with guarded point, for section of the cord; male and female catheters; a small *ecraseur;* needles, silk and silver wire in case; dressing forceps and a perineum needle; safety pins and a roll of linen bobbin.

Those who have hunted and struggled to find, even in the best regulated families, a piece of string of sufficient strength and of proper size to tie the funis, and have perspired *copiously* in endeavoring to force a blunt pin through a new linen bandage, can appreciate the comfort of having these last two articles always on hand.

The other side or compartment contains a case of twelve remedies that may be needed. Two ounces of brandy, ditto of ether and chloroform, a bag containing sponges, absorbent cotton, a yard of elastic tubing, an inhaler, a hypodermic syringe, some one-grain opium pills, and vials containing fluid extract of ergot and a solution of carbolic acid for cleaning and disinfecting the hands and instruments. Some persulphate of iron, a tube of vaseline and a Davidson's syringe complete the equipment.

This is the writer's obstetric pouch: always ready; takes but little room in the carriage, and is easily carried in the hand at night. When summoned to a case of confinement, it is always carried and is ready when wanted.—*J. S. Delavan in N. Y. Med. Times.*

DIABETES.

After an examination of many diabetics, Dr. Magitot has come to the following conclusions: *First.* Examination of the mouths of diabetics furnishes a constant symptom of the disease. *Second.* This symptom may be designated as an alveolar osteo-periostitis. *Third.* This manifestation appears at the outset of the disease, persists during its course, and can, in consequence, be considered a pathognomonic symptom. *Fourth.* This alveolar affection considered as a symptom of diabetes, presents three periods. Its first period is that of simple deviation of the teeth. Its second period is that of loosening of the teeth and alveolar catarrh. Each of these periods is in relation to the phase of the constitutional disease. The third period, that of the falling out of the teeth, corresponds to a more advanced stage of glycosuria. Besides this last symptom there may occur, if the patient lives long enough, an osseous eruption, which may or may not be consecutive to a gangrene of the gums. The appearance of this latter complication is evidence of a critical disease, as it ordinarily ushers in its fatal termination. The value, as a symptom, of the first stage of dental changes, remains to be determined. It must be obvious, however, that it can only occur in the more chronic form of glycosuric diabetes.—*N. Y. Med. Times.*

MANNERS AND MEN.

"Manners maketh man," according to the proverb. Manners make wealthy physicians and influential bishops in very sober fact. Who are they that enjoy the largest practice and the highest reputation for medical skill, whose word is law to a whole host of dyspeptic dowagers and anxious mothers, whose visits are regarded as a favor and their saloons thronged by a crowd of expectant votaries, and who suck thereout no small advantage? Not always the men who have most completely mastered the secrets of medical science or who have cured the greatest number of their patients. Few

people inquire or care about that. The velvet tread, the unctuous pressure of the hand, the silvery intonation, the sympathetic yet reassuring smiles, these are the infallible passports to many hearts, and, what is more, to many pockets. The Job's comforter who insists with obstrusive honesty on telling disagreeable truths, who pronounces with merciless fidelity the death warrant of the patient whom no human skill can save, and refuses to be fee'd by the interesting hypochondriac who likes to combine the luxury of valetudinarianism with the luxury of health, will often at best be treated with cold respect. He will not be trusted or employed. Far other is the lot of pompous sciolist, who knows, in a different sense from the apostles, how to become all things to all men, and more especially to all women. His cures, where any cure was needed, will be few. But he can whisper bland nothings into the doting mother's ear, as he suggests some new remedy as futile as the last, to mock the last agonies of her dying child. He is never at a loss when all is over to account for his skill being baffled by circumstances over which he had no control. The case was exceptional, or he was called in too late; and in the meantime, by the chronic treatment of imaginary ailments, he has won his income and his name. We have heard of a physician receiving 15 guineas each time for a visit, repeating every other day for years, his only real business being to condole in a professional manner with the wife of his ostensible patient, who was a hopeless invalid. *Short Studies by H. N. Oxenham.*

NEW HEMOSTATIC AGENT.

Dr. Spaak employs two parts of chloroform to 200 parts of water as a hemostatic in operations on the mouth and throat and claims that patients thus treated suffer but slight hemorrhage.

He also uses the chloroform water as a spray after excision of the tonsils. This chloroform water seems to close the open mouths of all small blood-vessels instantly. —*Journal de Medicine.—Lancet and Clinic.*

DIGITALIS IN CARDIAC VALVULAR DISEASE.

Nothnagel observes that no treatment is indicated until disturbances of compensation became apparent. Then secure rest by confining the patient to bed, and strengthen the weakened muscles by digitalis (none of the four alkaloids or their combinations, except as found in the plant, will answer), gr. ½ of the powder every three hours, for five or six days; then stop for five or six days, and repeat as before. If no relief, increase the dose to gr. 1 every two hours. The poisonous symptoms occur suddenly and commence with vomiting, and a rapid pulse of small tension. It may be combined, though rarely, with quinine, gr. ½—2½. Where digitalis fails, caffein, in doses of gr. ½, may be substituted.—*Pacific Med. and Surg. Journal.*

WARM DOUCHING OF THE HEAD AND NECK IN CONTINUED FEVERS.

In continued or eruptive fevers, when the patient is sleepless, the temperature high, and pulse rapid and feeble, with jactitation, brown, dry tongue, and sordes on the teeth, nothing will afford such prompt relief and so quickly induce refreshing sleep, according to the opinion of Dr. A. J. Campbell, in the *British Medical Journal*, as, after wrapping a patient's shoulders in a sheet, and plugging his ears with cotton, to pour a small stream of warm water over his head and neck from an elevation of eighteen inches, for three or four minutes. The head and neck may be supported over a vessel at the side of the bed.

CARBOLIC ACID IN INDIGESTION.

Dr. Edward Berdoe thus writes in the *British Med. Jour.* :

I have lately treated several cases of indigestion with carbolic acid, and the results have in each instance been so fortunate that I am anxious to add the results of my experience. I have found it most useful in that form of

dyspepsia known as fermentative; accompanied by constant sour rising and eructations of gas, with pain after meals. and discomfort, even after drinking milk or cocoa. My attention was first directed to it by Dr. Fenwick, who gave the glycerine of carbolic acid (1 part of crystallised carbolic acid to 4 parts of glycerine). The dose is from five to ten minims in mint-water, or other convenient vehicle. As it mixes well, I think it a more safe and elegant form than a solution of the acid in water only. When there is much pain of the stomach after food, I have found it useful to add five or six minims of the liquor opii sedativus to each dose; and when there is want of tone in the seat of digestion, and bad appetite, five or ten minims of the tincture of nux vomica will often be found serviceable. I have found these remedies also very valuable in the above combination in cases of pyrosis, where, I think, the sedative influence of the carbolic acid on the mucous membrane is far more useful than the bismuth one usually gives in such cases. It is an interesting subject of inquiry whether the carbolic acid acts by arresting fermentative changes in the stomach, or by its well known anesthetic influence on mucous membranes. I have long given one grain pills of this remedy in cases of vomiting from various causes, and have rarely found it to fail to arrest it. In some of these cases there was no fermentative condition of the contents of the stomach; some of them were cases of reflex vomiting; yet all were, with few exceptions, greatly benefited. It would be desirable that the subject should be still further discussed by those who have had experience of the drug.—*Am. Med. Digest.*

SLOUGHING OF THE VAGINA.

Dr. Chalmers reported before the British Gynecological Society the case of a primipara who was delivered by forceps, with only a slight rupture of the perineum; on the fourth day there were signs of septicemia; the vulva and vagina became gangrenous; there was broncho-pneumonia. Later, a rash, dusky red, closely resembling measles, appeared over the limbs and body. In spite of all

these complications, the patient recovered. The points of interest were, first, the sloughing under so little pressure; secondly, the absence of pain, except on the second day; thirdly, septic influence attacking three cavities of the body in turn; fourthly, the eruption and its cause; fifthly, the recovery of the patient under such grave and complicated conditions. In the sixth place, as evidence of the virulence of the septic products, he stated that the nurse had to go home with malaise and erysipelas of both legs. The medical man had an angry pustule of the wrist, and the second nurse suffered from a severe attack of diarrhœa; and, from having had some of the patient's liquid feces on her hand, the tender skin between the fingers was blistered, and an itching of the skin of nearly the whole hand was set up, which lasted for several weeks.—*Weekly Med. Rev.*

MANGANESE IN AMENORRHŒA.

My attention was arrested some two years ago by an article on the use of binoxide of manganese in amenorrhœa due to hygienic imprudence at the menstrual nisus, disturbances, etc. A short time thereafter a Miss N., aged seventeen, came under my care.. She had taken a severe cold at a dancing party, from the effects of which her menses, which were then on her, became suddenly suppressed. She presented symptoms of decline, with hectic, nervous chills, dry cough, and general malaise. After having for a reasonable period tried the usual remedies without result, I concluded to test the virtue of manganese pills. I had an impression that the grave symptoms were due to the suppression of the menses, and that with these re-established, improvement would ensue. I ordered one pill to be taken at bedtime every night. After five pills had been thus taken the catamenia appeared and under the use of wine and iron the patient was soon restored to her original good health.

I have since had two similar cases, which I treated in a similar manner with similar results. In one of these

the suppression had existed for several years, and had been treated by eminent physicians both of Michigan and of the West, whither she had been sent in the hope of benefit from the change of climate. In this latter case fifteen pills taken nightly in the course of two weeks, in combination with tonic diet and medicines, wrought such a change that the patient became a regular patron of the roller skating rink, where she would exercise for two hours at a time without fatigue. The remedy is certainly one of great power in amenorrhœa.—*Dr. A. R. Hicks, in Medical Age.*

CARBONATE OE AMMONIA IN SCARLET FEVER.

Dr. A. W. Jackson, of Brooklyn, write to the *Med. Record,* calling attention to the treatment of scarlatina first brought prominently into notice by Dr. Peart, of England. This consists in the administration of from three to seven grains of carbonate of ammonia every hour for the first day, and then at longer intervals. Purgatives are to be avoided during the early stages of the disease. The writer states that he has had occasion to test this mode of treatment, and can endorse it heartily. In addition, he employs the fluid extract of eucalyptus internally and as a gargle. When there is much exudation, a mixure of carbolic acid and iodine in glycerine is painted over the parts. In too rapid recession of the rash, Dr. Jackson applies cloths dipped in thick mustard water, or wraps the child in blankets wrung out in hot water. —*Med. Digest.*

TREATMENT OF ANGINA PECTORIS BY THE IODIDE OF SODIUM.

Angina pectoris since the days of Gintrac and Lancereaux has been considered as a cardiac neurosis. Although in many cases a diseased condition of the coronary arteries and the aorta has been found, still the symptoms have been ascribed to a nerve disturbance dependent more or less on the innervation of the heart muscle or upon some degenerative change of the nerve fibres. M. Henry

Muchard, from a study of twenty-five post-mortem examinations made at "Hospital Vichart," objects to this view and ascribes the symptoms directly to degenerative changes with obstruction of the coronary arteries. He claims that true angina pectoris is the result of a disease of the arteries and not of the nervous system.

In accordance with this theory he advises remedies which have an effect on the arterial system. The iodide of sodium is especially recommended, given in doses of sixteen to thirty grains daily. He continues this medication during months and even years, and to have given complete relief and to have produced a cure of this dreaded disease in many cases. He thinks that the iodide of sodium probably acts by lowering the blood tension, relieving the walls of the artery and favoring the disappearance of the pathologic exudation. For the relief of the paroxysm he recommends the inhalation of the nitrite of amyl in four to six drop doses.

Although true angina pectoris had been assumed to be a neurosis, the remedies which have been mostly successfully employed have been those acting upon the arterial system. Occurring as it does at the ages when degenerative changes in the arteries are found and in subjects of such degeneration, it would seem that the theory advanced by Huchard should be carefully considered. That it is generally accompanied by high arterial tension has been already recognised, and the drugs have been most successfully used which reduced this tension. Dr. Lauder Brunton has long since recommended the nitrite of amyl in reducing blood pressure, and we are indebted to Dr. Murrell for our knowledge of the value of nitro-glycerine as a remedy producing the same result. Both remedies have been successfully employed in relieving attacks of angina pectoris, but neither have been able to effect a permanent cure.

That the iodides from their well-known action of lowering the blood pressure and at the same time favoring the disappearance of pathological exudations may exert a healthy action in the earlier stages cannot be denied, but

in cases connected with well developed atheroma more evidence is needed before it can be positively accepted.—*Courier of Med.*

A MUSTARD-SPONGE.

In referring to sponge as a carrier of poultices, Dr. Richardson considers that it makes the best of mustard carriers. The nurse mixes the mustard in a basin with water until the mass is smooth and of even consistency. Then she takes the soft mass all up with a clean sponge, lays the sponge in the centre of a soft white handkerchief, ties up the corners of the handkerchief neatly to form a hold, and applies the smooth convex surface to the skin. This mustard sponge, warmed again by the fire and slightly moistened, can be applied three or four times, is good for several hours, and saves the trouble of making a new poultice for reapplication, often a matter of importance during the weariness of night watching. The sponge can afterward easily be washed clean in warm water. It is scarcely necessary to add that this method will save both time and trouble, and that the same sponge may be used frequently.—*Jour. Am. Med. Ass'n.*

NERVE-STRETCHING.

Professor Heydenreich, of Nancy, in a paper published in the *Semaine Medicale*, No. 8, after reviewing the clinical results hitherto obtained by this procedure, gives the following estimate of its applicability:—"First, two facts are observable. Stretching is not absolutely an innocuous procedure, and the inconsistent results obtained are generally incomplete or temporary. We should not, therefore, have recourse to it until having employed without benefit medical means of treatment, unless, indeed, the gravity of the affection, conjoined with the slight efficacy attendant upon medical treatment, compels immediate intervention—as in tetanus. Second, for the treatment of neuralgia it is a question whether stretching should be preferred to section or excision of the nerves. With

respect to a mixed nerve, as in most of the neuralgias of the limbs, there can be no doubt of stretching having the advantage of preserving well-nigh intact the motor function of the nerve, which after neurotomy or neurectomy is often definitively lost. Third, but when the neuralgia affects a purely sensitive nerve, as the trifacial, it is difficult to pronounce on the respective value of these operations. Neither of them guarantees success, nor secures against relapse. But as stretching the nerves of the face is not exempt from danger, section, and especially excision, would seem to be preferable. Fourth, in local or general spasmodic affections, stretching regains all the advantages, the operation being applicable to motor and mixed nerves. We should have recourse to it especially in reflex epilepsy, and in traumatic tetanus, when a peripheric point of departure can be recognised in these neuroses. Fifth, stretching will be of service sometimes in peripheric paralyses, especially when these are traumatic. Sixth, I would not venture to advise this operation for glaucoma, in which iridectomy is the heroic remedy. Seven, as regards affections of the central nervous system, and especially locomotor ataxy, the influence of stretching seems to be so variable, and sometimes so mischievous, that it will be more prudent, unless new facts throw more light on the question, to obstain from this mode of surgical intervention."—*Med. Times.*

NEPHRECTOMY, ITS INDICATIONS AND CONTRA-INDICATIONS.

1. Primary extirpation of the kidney is indicated, first in sarcoma of adult subjects; secondly, in the early state of tubercular disease; thirdly, in rupture of the kidney or of the ureter; and, fourthly, in benign tumors.

2. Nephrectomy should not be resorted to until after the failure of other measures; first, in urinary fistulæ of the kidney or of the ureter; secondly, in protrusion of the kidney through a wound in the loin; thirdly, in recent wounds of the kidney or of the ureter made in the performance of ovariotomy, hysterectomy, or other oper-

ations; fourthly, in suppurative lesions; fifthly, in hydro-nephrosis and cysts; and, lastly, in floating kidney.

3. The operation is absolutely contra-indicated, first, in calculus of an otherwise healthy kidney; secondly, in sarcoma of children; thirdly, in carcinoma at any age, unless the disease can be diagnosticated and removed at an early stage; and, fourthly, in the advanced stage of tubercular disease.—*S. W. Gross, Trans. Am. Surg. Assoc'n.*

TREATMENT OF CARDIAC HYPERTROPHY OCCURRING IN YOUTH.

Germain Sée observes (*Archives of Pediatrics*, May 10, 1885) that in the hypertrophy of adolescence, as well as in the hypertrophic ectasis of childhood, the treatment should be exclusively cardiac, in other words, general tonics should yield to those which have a direct action upon the heart. Meats, however, raw or rare, and finely divided, should be partaken of in abundance. Digitalis is exclusively used (by the author) for temporary purposes; convallamarine is always to be approved, and the same is true of iodide of potash, the latter being considered one of the most powerful cardiac and respiratory agents. Digitalis is recommended for children in the form of a cold maceration of the powdered leaves, the dose being five to ten centigrammes of the powder. It is indicated in the arythmical forms of hypertrophy, and especially in cases of infantile cardiac dilatation, but its continued use provokes intolerance, loss of appetite, vomiting, and in some cases a kind of paralysis of the vagi. Iodide of potassium acts not only upon cardiac dyspnœa and the so-called cardiac asthma, but it has a powerful influence upon the myocardium as well as upon the vessels, increasing their contractile energy. It facilitates respiration at once, and effects a lasting tonic action upon the heart. From eight to fifteen grains may be given daily in the class of cases under discussion. Usually its use may be continued for months with no greater discomfort than the iodic coryza, or anorexia. Convallamarine is usually well tolerated, rarely troubles the digestive

functions, and has no cumulative action like digitalis. In a rather extensive experience with this drug, the author affirms that it has always sustained the contractile force of the heart, regulated the cardiac rhythm, produced a cessation of palpitations, and facilitated respiration and diuresis. It is very soluble in dilute alcohol, and may be given to children in doses of one-third to two-thirds of a grain. It has also been successfully given in valvular troubles, in Basedow's disease, in angina pectoris, palpitations, and all the painful affections of the heart. The unfavorable symptoms quickly disappear under its use, especially when combined with the iodide, and the commendation which it receives is unqualified.—*Med. Rec.*

SEEING YELLOW AND HEMARALOPIA AS SYMPTOMS OF ICTERUS.

Hirshberg reports an interesting case to the *Berliner Medizinische Gesellschaft*, where the patient has been suffering with disease of the liver and icterus for six years. The patient made application for treatment for the relief of nightblindness from which he has been suffering for the past three weeks. During the day vision is fair, but a yellow, misty appearance annoys the patient. At night he must be led. The field of vision was normal. The ophthalmoscope did not reveal any special symptoms. When the test for color blindness was made all colors appeared yellow; green was mistaken for blue, and very dark blue for black. Hirshberg thinks night blindness is dependent on blue blindness. The appearance of these symptoms in connection with icterus are not of frequent occurrence. Frank claims to have seen it 5 times in 1,000 cases. Traube doubts that seeing yellow is caused by icterus. Frerichs, in his great work on diseases of the liver, is just as doubtful about this point. It certainly does not occur often. Leber (in Græfe and Sæmisch) only mentions two cases. In these cases a post-mortem examination later showed cirrhosis of the liver, but no changes of the optic nerve. The cornea was slightly discolored. In the case reported by Hirshberg the cornea was perfectly clear.

Editorial.

PROTECTIVE INOCULATION AGAINST CHOLERA.

The name of Dr. Ferran of Spain is at present on everybody's tongue. A month ago it was probably known to few persons outside of the district in which he lived. The occasion of this sudden celebrity is the claim of the Spanish doctor that he has been able to modify, by cultivation, the germ of Asiatic cholera, and by inoculating the same into healthy persons, produce a mild attack of cholera, which proves protective against future attacks.

The so-called "comma-bacillus" of Koch is said by Dr. Ferran to be merely a stage in the development of the organism, which belongs to the species *peronosporeæ*, and which has been named *peronospora Ferrani*, in honor of the Spaniard. This completed development of the organism can only be obtained by cultivation in a suitable culture medium.

Dr Ferran has pursued his investigations for some time and has made many inoculations with his cultivated virus, with the result of producing a mild, febrile, infectious disease, which, it is claimed, protects the inoculated individuals against Asiatic cholera. The secular press teems with accounts of the success of Dr. Ferran's experiments; but those whose previous experience entitles them to speak with authority have thus far failed to corroborate them.

In the absence of adequate confirmatory evidence, it will be advisable to regard the claims of Dr. Ferran with considerable hesitation. Theoretically, at least, his conclusions are in opposition to the following well-established facts:

1. The researches of Koch and other micro-botanists have shown that the so-called "comma-bacillus" is a spirillum.

2. One attack of true cholera does not protect against subsequent attacks, even in the same epidemic; hence there is no good reason for believing that an attack of a modified disease will prove protective.

3. There is no trustworthy evidence that inoculation with true cholera material will produce cholera; consequently it is unreasonable to accept the disorders produced by inoculation of the cultivated material as choleraic in any sense.

4. The symptoms following the inoculation of Ferran's cultivated virus raise the suspicion that the disorder produced is a transitory septicemia, due to the introduction of putrefactive material into the blood.

We do not take much stock in the protective inoculation of cholera, yellow fever, or syphilis. In all three diseases we believe other methods of prevention are safer, surer, and more rational.

FOREIGN BODIES LEFT IN THE ABDOMEN AFTER LAPAROTOMY.

In an interesting paper read before the American Gynecological Society, Dr. H. P. C. Wilson of this city has collected details of thirty cases in which various foreign bodies, principally sponges and artery forceps, have been accidently left in the abdominal cavity after the operation of laparotomy. Six of these cases have occurred in this country. In most of them the oversight was only discovered on post-mortem examination. This, perhaps, also explains why out of the entire thirty cases only six have been published; one in this country and five in Europe. The cases in which the foreign body was recovered before death, or in which death was not caused by the foreign body, have all found their way into print, but concerning the fatal cases a most ominous and mysterious silence prevails. Dr. Wilson expresses the opinion "that the unknown are much larger than the known accidents of this kind." He is probably right.

The author of the paper also believes that the presence of too many assistants at an abdominal operation increases the risk of leaving instruments and sponges in unsuitable places, where they are likely to give serious trouble to the patient.

Current Literature.

Hay Fever, and its Successful Treatment by Superficial Organic Alteration of the Nasal Mucous Membrane. By Charles E. Sajous, M. D., Instructor in Rhinology and Laryngology in the Jefferson Medical College, etc. Illustrated with thirteen wood engravings. Philadelphia: F. A. Davis, Publisher, 1885.

The advent of the hay fever season makes this little volume a particularly timely contribution. The symptoms, causes and pathology of the affection are set forth, and the most approved methods of treatment followed by specialists are clearly described. The therapeutics of modern rhinology seem to be largely operative, and a careful study of this work will enable most physicians to successfully treat one of the most obstinate and aggravating diseases.

Urinary and Renal Derangements and Calculous Disorders. By Lionel S. Beale, M. D., etc. Philadelphia: P. Blakiston, Son & Co., 1885. 8 vo., cloth, $1.75.

In this book Prof. Beale deals in a very practical manner of the derangements of the urinary secretion and their pathological significance. The diagnostic and therapeutic hints thickly scattered throughont its pages render the book of very great value to the practitioner. Few medical authors have the faculty of expressing their ideas as clearly as the distinguished professor of medicine in King's College.

History of the two Americas. From the Earliest Discoveries to the Present Day. Illustrated with forty-three full page steel engravings. Baltimore: 1884. Henry C. Erich, publisher and importer.

This large and handsome volume is truly a "surprise book" of American History. It contains without abridge-

ment Belknap's Biographies of the Early Discoverers; Grahame's History of North America; Robertson's History of South America; Ramsay's History of the United States; Hubbard's History of the Indian Wars in New England, and a Chronology of American History from 458 to 1881.

Among the illustrations are steel portraits of all the presidents of the United States, including President Cleveland. The book is in quarto form, printed on heavy paper, and very handsomely bound. It is an ornament to every library, and should be *owned* by every liberty-loving American.

Flotsam.

THE price of cocaine is coming down.

CAPSICUM, in doses of three grains, morning and night, is said to cure anal fissure.

BOSTON doctors recommend tossing in a blanket as a cure for indigestion.

THE publication of the *Index Medicus* has been resumed, Mr. Geo. S. Davis of Detroit becoming the publisher.

DR. J. C. WILSON has devised and the J. B. Lippincott Co. publish an excellent clinical chart for recording the temperature, pulse, respiration and other clinical memoranda in cases of acute disease. The charts are put up in blocks of fifty and sold at fifty cents.

ONE of the cutest of A B C books is the "HOUSEHOLD PRIMER." Each large letter has an amusing picture and a pretty verse. The whole is daintily printed in brown; and, best of all, is mailed free by D. Lothrop & Co., Boston, on receipt of a 2-cent stamp.

WE call attention to the advertisement of the Antizymotic Disinfectant which will be found in our advertis-

ing pages in this issue, the preparation has received the high endorsement of the Health Officer of Chicago, who, we are informed, uses it for disinfe cting purposes in that city.

A NEW medical college will be opened in St. Paul next winter. The faculty includes the best professional talent in the Northwestern metropolis. The course will be a graded one of three sessions, and a preliminary examination, or a certificate of graduation from a high school will be exacted before a student is allowed to enter. With the talent enlisted the new enterprise ought to be successful.

WE are glad to learn that the beautiful little statuettes prepared by the Committee of the Statue of Liberty are being subscribed for throughout the length and breadth of our country. This is as it should be, for it is the noble gift of France to the United States. Every lover of liberty should subscribe $1.00, which, if sent to Richard Butler, Secretary, 33 Mercer Street, New York, will secure one of these artistic statuettes, being a fac-simile of Bartholdi's great work.

Let the good work go on until every home in the land shall possess this proof of ownership in the grandest work of modern times—"Liberty Enlightening the World."

THE new quarantine system at the New Orleans quarantine station was put in operation June 10th. All vessels arriving will be divided into four classes, as follows:

First class, arrivals from non-infected ports; second class, arrivals from suspected ports; third class, arrivals from infected ports; fourth class, infected vessels from any port. The first class are to be subjected to sanitation at the upper quarantine station without more than the necessary detention. The second class are to undergo the same process with the addition of five days detention. Third class vessels are to be held seven days, and the fourth class remanded to the lower station for a period which insures perfect safety.

—THE—

MEDICAL CHRONICLE.

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Original Articles.

ARTICLE I.

ON THE IMPORTANCE OF CERTAIN SIGNS IN MAKING THE DIAGNOSIS OF FRACTURE NEAR A JOINT.

By OSCAR J. COSKERY, Prof. of Surgery, College of Physicians and Surgeons, Baltimore

On May 25th, 1885, I first saw Mr. Henry D——, aged 74, who, nearly a week before had been jarred off the lower step of a street car, and fell to the ground, striking the outer and upper part of the left thigh. From that time he has not been able to use his limb for walking, nor can he now, as he lies in bed, lift the thigh except by the help of his hand. There were no naked-eye appearances of fracture, no apparent shortening, no eversion or inversion of the foot, and the only pain the patient complained of was a feeling of discomfort on the outer side of the thigh, just above the knee. On examining more carefully no crepitus could be distinguished, but on pressing the fingers and thumb deeply in front of and behind the great trochanter, and grasping the neck of the bone, pain was elicited; and there was also noticed quite an extensive extravasation of blood on the *inner* side of the thigh, near the perineum. The diagnosis of impacted extracapsular fracture of the neck of the femur was made and the following day appointed for the application of the Physic's splint. When seen again for the above purpose, the foot was found completely everted; there was indistinct crepitus, and the limb was shortened three quarters of an inch. These signs of fracture were referred to the handling (for diagnostic purposes) of the day before,

and were thought to have incontestably proven the correctness of the diagnosis. The limb was put up upon the straight board and the patient did well.

John K., aged 45, brewer, was admitted into St. Joseph's Hospital on June 24, 1885. Eight days before, he fell about ten feet into a cellar, striking upon his left side; upon attempting to rise found he could not stand upon the left limb, nor has he walked a step upon it since the accident. On admission he stated that the only severe pain he had had was at the outer side of the thigh, in its lower fourth. The upper third of the thigh was greatly swollen. When all apparatus was taken off the foot showed no signs of eversion. There was no *apparent* shortening, (very accurate measurements were not attempted). On grasping the neck of the femur, as in the former case, very decided pain was elicited, and the bone was found to be much thicker than upon the right side; no crepitus could be elicited. On the inner aspect of the upper fourth of the thigh ecchymosis and extravasation were much more apparent than upon the outer side. The diagnosis of impacted intra-capsular fracture of the femur was made.

The patient was slung in the anterior splint, and, while still under notice, is doing perfectly well.

In connection with these two cases I might cite another. Some few months since a man aged about 55 came into the clinic with the following history. Three days before he had fallen upon his left shoulder and since that time he had been unable to use the limb. Upon examination there was found a very slight amount of antero-posterior broadening, but upon grasping the bone at one point, about midway between the articular surface of the head and the prominence of the greater tuberosity, pain was elicited, and a large ecchymosis had occurred on the inner and upper third of the limb. There was very slight deformity (mentioned above), no crepitus or increased mobility. The diagnosis of impacted intra-capsular fracture of the humerus was made.

My only object in this paper is to call attention to the

following: In the majority of text-books the classical signs of fracture are given as three—*crepitus*, *deformity* and *mobility* where there should be none. Every surgeon of any experience knows how deceptive and useless the first and last of these signs are when the fracture is near a joint, or impacted, and how often it is only after giving our patient much unnecessary pain and with great trouble to ourselves that we can make out any deformity, especially when impacted. But there are three other signs that stand us in as good stead in these very cases and they are—*fixed* pain, the *site* and *quantity* of the hemorrhage, and the *perfect helplessness* of the limb. I am perfectly aware that I am advancing nothing new in alluding to them, but wish to call attention to and point their importance. In the three cases given above, the diagnosis was made from them alone.

We will take up and describe each of these signs. It often happens, as for instance in fractures of the fibula alone, that we can observe no *deformity*, *crepitus* or *mobility*, but, if we follow the line of the fibula up, at *one* certain point, the tip of the finger elicits pain. If this is always complained of whenever pressure is made upon this point, I think the diagnosis is plain. The pain is evidently due to the soft parts being irritated by the sharp edges of the fractured surfaces.

The second of these signs, the *site* and *quantity* of the hemorrhage should be considered thus: my patients fell, striking upon the *outer* side of the limbs and ecchymoses slowly made their appearance on the *inner* side, and then in considerable quantity. Had the bleeding been the result of contusion alone, it not only would have appeared sooner but at the point injured. As it was from the small and non-contractile vessels of the bone, the bleeding was longer in progress than it would have been in the soft parts, where, very probably a larger vessel would have been ruptured. Again during this slow bleeding the blood had time to gravitate to a dependent position, or direction of easiest escape.

But, in my own opinion, the absolute helplessness of

that portion of the limb that contains the broken bone is, probably, the most important of these signs. The fact that a patient has not made a step after the accident, or raised his hand above his head, is a strong point to start from in attempting the diagnosis. (I am aware that persons are said to have taken a few steps after having met with an impacted intra-capsular fracture of the femur, but this has nothing to do with the point under consideration).

There is one mistake that I have several times seen made in diagnosticating fractures of the femur.

When the patient is told to raise his thigh from the bed he can do so by contracting the hamstring muscles, sliding the heel upon the bed, and thus the lower end of the femur is pushed up by the head of the tibia; but the psoas-magnus and the iliacus do not contract.

For fractures in the continuity of the long bones these signs are, of course, of no use, but for those in which difficulty of diagnosis so often leads to *mistakes* in diagnosis, I think the presence of one or more of them should suggest to us the probabilities of a fracture and should indicate to us the proper plan of treatment.

SANITARY CONVENTION AT YPSILANTI, MICHIGAN.

(Reported for the MEDICAL CHRONICLE.)

Great interest was manifested in the Ypsilanti Sanitary Convention which was held June 30, and July 1, 1885, under the auspices of the Michigan State Board of Health. The physicians of Ypsilanti, the professors of the State Normal school, and a large number of other prominent citizens of that place were in constant attendance. About 20 physicians and health officers from other places were also in attendance.

Edwin Willets, President of the Michigan State Agricultural College, presided over the convention; and in his address dwelt upon the value of human life consid-

ered from an economic standing-point as worked out by eminent statistics.

A number of people who should produce $3,000.000 when in good health, could produce when not in good health only $2,000.000. Here is a loss of one-third, much of which could be saved by applying the simplest sanitary precautions. It is the duty of a community to keep these human earning machines in good condition of health or earning capacity, even from economical motives. A community has the legal right to do this. We want pure water and plenty of it, clean streets, cleansed sewers and drains, swamps drained, cesspools filled up, and we should not count the cost on our fingers. The crowning labor of our medical science is the warding off of disease. Given by heredity a sound constitution, pure air, pure water, and nutritious food ought to guarantee to every human being, as he puts his foot on this earth, his three score years and ten, with which assurance he might plan the labors of a well-rounded life.

Rev. Dr. Woodruff, of Ypsilianti, read a paper on "The Moral Effect of Sanitation." He told of the importance the ancient Jewish people gave to sanitation, and in a forcible way pointed out its power in elevating man morally as well as socially and physically. He thought the present attention given to sanitary matters is not temporary. The reform has come to stay.

Prof. Austin George, of the State Normal School, spoke on "Sanitary Needs of School Buildings and Grounds."

1. School site should be on gravelly soil, a natural knoll, admitting thorough drainage. 2. Wells should not be nearer than 100 feet to the out-houses. 3. Basements should be high, with free circulation of air under ground floors. School rooms should contain 250 cubic feet of air space for each child. The light should come in over the left shoulder. The windows should go to the ceiling, and within three and one-half feet of the floor. The blackboard should be on the side of the room opposite the windows, and never have a glossy surface. 4. The simplest heating and ventilating apparatus is the hot-air

furnace, and for small buildings the jacketed stove. The foul air outlets should be ample, and at the floor level. With any system, the rooms should be frequently flushed with fresh air through windows and doors. The temperature should be kept at 70° Fahr., not by teachers' sensations, but by thermometers. 5. Perfect desks and benches not yet made; they should be adjustable, to suit different sizes, and be constructed with reference to the curves of the body. There should be foot-rests which could be raised or lowered until each pupil is made comfortable and able to take a healthful position. Many spinal complaints and pulmonary diseases are produced by improper desks. 6. Means for drying wet wraps should be provided. 7. Precautions against fire should be had, especially in the heating apparatus and the chimney. 8. "Inasmuch as the state educates the children, and compels their attendance in public building, the state should see that the children are not subjected to any preventable cause of disease."

Dr. Bion Whelan, of Hillsdale, Mich., spoke on "Sanitation in Small Cities." The water supply should be guarded from contamination from cesspools and vaults. If we could not have sewers, the most feasible plan for disposing of garbage is to divide the city into districts and have it removed by licensed scavengers. Sanitary science should be taught in schools. The women should be taught sanitary needs, as much of sanitary work falls upon them. The nature of contagious diseases, and means for their restriction should be known by all.

Dr. J. H. Kellogg, of Battle Creek, member of the State Board of Health, treated of the "disposal of slops and garbage," illustrating by use of the blackboard. He pictured in a graphic way the ordinary condition of back yards, as contrasted with front yards. He prefaced his subject proper with a brief description of bacteria and other low forms of microscopic life and showed the relation of these to decay, no decay being possible without their intervention. He showed the importance and usefulness of certain sorts; the dangerous nature of others.

He spoke of flies in relation to filth. They are a very strong indication of the presence of filth, and consequently of germs, and it is even believed that the germs of certain diseases may be spread by them. Whenever a house is full of flies, you may be certain that slops or garbage of some sort has been allowed to accumulate about the premises. He stated that the air about cesspools, foul drains, and other filthy places is usually swarming with micro-organisms, and he believed that even if such germs were not the direct cause of certain diseases, continual breathing of such air predisposes thereto. All sources of filth should be carefully and speedily removed from the habitation and its vicinity. Garbage can be reduced to a minimum by a little attention to domestic economy. Much food that becomes garbage through carelessness could be turned to good use if not neglected. Even after due care, however, some refuse will remain. So far as possible this should be burned; that is the best method of disposal. Where it is impracticable a water tight, covered receptacle can be used for receiving such refuse, which should be removed frequently by a paid scavenger, or otherwise. Slops should not be thrown upon the ground, into open drains, or into cesspools in the yard. He had known of frequent instances in which wells and cisterns were contaminated from the seepage of foul privies, drains, and cesspools. If slops must be poured on the ground, set off a portion of the back end of the garden, and distribute the slops on different parts of it on alternate days, giving in this way some opportunity for the soil to oxidise the organic matter. Slops containing excreta from contagious diseases should be thoroughly disinfected.

Chas. R. Whitman, of Ypsilanti, one of the regents of the Michigan University, read a paper on the "Limitations and Duties of Local Boards of Health." The powers and duties of local boards of health should be as follows.

1. To ascertain the causes of sickness and of death, and from time to time the prevailing diseases among all classes.

2. To prevent or mitigate diseases, especially zymotic or epidemic, endemic, and contagious diseases.

3. To effect the periodical or special vaccination of the inhabitants.

4. To ascertain, prevent and remove or abate nuisances dangerous to public health.

5. To prevent the introduction of malignant, infectious, or contagious diseases, and to isolate persons afflicted or believed to be afflicted with such diseases.

6. To establish, locate, and manage hospitals for persons having contagious diseases.

7. To prevent the sale of any article for food or drink which is unwholesome.

8. To enforce these regulations by a sufficient penalty.

Mr. Whitman said that the radical defect in the law defining the powers and duties of local boards of health is the lack of a general law forbidding evils and imposing penalties. Such a law should be enacted, and it should be as sweeping and as readily enforced as is the criminal law. He thought that the subject of sanitation should become one of education in the schools, so that the future citizen, architect, and physician may be established in principles of sanitation.

After thorough discussion of this paper, participated in by Prof. A. B. Palmer, of the University of Michigan, and many others, it was voted that Mr. Whitman be requested to draw a bill suitable for presentation to the legislature, framed to cover the question under discussion, and suited to correct existing defects in the present law. The bill is to be published in the proceedings of this convention.

Dr. O. W. Wight, Health officer of Detroit, spoke on the "Prevention of Communicable Diseases." He showed clearly the contagious nature of those diseases; the great and unnecessary loss of human life resulting therefrom; and how they were best restricted, citing cases from his own long experience in Milwaukee and in Detroit. The main points in an outbreak of a contagious disease are:

1. On the part of the householder and physician.
   (*a*). Speedy determination of the nature of the disease.
   (*b*). Prompt notification to health officer.
   (c). Cheerful acquiescence in regulations of health officer.
2. On the part of the health department.
   (*a*). Immediate separation of sick from well, as only those required to nurse should be allowed in the room ; the sick room should be an upper chamber.
   (*b*). Strict quarantine of the premises, and placarding of the premises ; if small-pox, all exposed should be vaccinated in both arms ;
   (*c*). Private funeral ;
   (*d*). Thorough disinfection, after death or recovery, by chlorine gas or fumes of burning sulphur, of bedding, clothing, premises etc.

Dr. Wight thought that diphtheria and scarlet fever were some times spread by careless physicians,—criminal carelessness. During four years in Detroit he had witnessed a large growth of public sentiment in favor of public health work.

Dr. Victor C. Vaughan, of Ann Arbor, member of the State Board of Health, next spoke on "Water Supply." Sources of water-supply are three—cisterns, surface, and subterranean. Cisterns should always be plastered outside and inside, with an excavation of at least two feet larger than the reservoir, so that a brick or stone wall may be built or plastered as above. Cistern water when boiled and filtered is the best for use. Dr. Vaughan cited cases in Ann Arbor and Adrian in which drain water percolated into cistern water, causing malignant typhoid fever. In the discussion of surface water, he said that we had in this country all conditions for the development and spread of the cholera germ should it once reach our shores. Well water is a suspicious water because of the ease with which contamination can be carried down through the sand and gravel into the well. Subterranean water is not necessarily pure. By carefully selected

illustrations he showed that contamination would be carried through the soil an almost limitless distance by the percolation of water, the water acting as the carrying agent.

Dr. Ruth A. French, of Ypsilanti, read a paper on "Management of Earth Closets." It is a practical way out of the "privy nuisance" for towns too small to have sewers and a general water-supply. Earth closets deodorise the excreta; destroy germs of contagious diseases; and are necessary to invalids.

Erwin F. Smith, of Lansing, spoke on the "Relations of Sewerage and Water-supply to the Death-rate in Cities." His general propositions were:

1. Some method of sewage disposal is a necessity of civilised life.

2. Dry earth closets, *properly cared for*, will answer for isolated dwellings and small villages, but water carriage is the only system adapted to large towns and cities;

3. The prevalence of typhoid and cholera is in an inverse ratio to the sewerage of a city.

4. The modern increase of diphtheria cannot be attributed to sewers.

5. The death- rate from all causes falls whenever a city is thoroughly sewered, and never attains its *ante-sewered* maxima.

6. Judged solely from the standpoint of pecuniary economy, the lowest of all standards, sewerage and water supply can be successfully defended against all opposition.

The statistics used in this paper are drawn from the highest authorities, American and Foreign, are brought down to the close of the year 1884, and in many cases cover long periods—10 to 40 years. They show that typhoid fever has fallen off from one-half to nine-tenths in sewered cities since they adopted sewerage, and that such cities are practically secure from the ravages of cholera.

Per contra, in non-sewered cities, the typhoid fever and the cholera mortality is as great to-day as it was thirty years ago.

Dr. H. F. Lyster, of Detroit, advocated the separate

system of sewerage as best, and said it could be built in small cities for about $6,000 per mile. He spoke of the evil influence of soil infection by vaults and privies and urged sewerage as a sanitary necessity.

A number of interesting papers on matters of local sanitary interest were also read and actively discussed. At the close of the convention a local sanitary association was organised.

Correspondence.

THE ACTION OF MURIATE OF COCAINE ON THE EYE.

Editor Medical Chronicle:

Sir: The following experiments were made upon three patients. Two drops of a 4 per cent. solution of muriate of cocaine were dropped into the eye, and repeated three times at intervals of five minutes. Mr. F., an intelligent patient, was first placed under observation. The sense of touch or weight was tested by touching the ocular conjunctiva at different places by means of a small probe. The cornea of the eye experimented upon was completely opaque, and the other eye closed, so that vision did not aid the patient in determining the result. The patient distinctly recognised the contact of the instrument in every instance, and when asked to indicate with his finer the point of the eye touched, placed his finger upon the probe. The temperature sense was also tested in the same way, by alternately warming and cooling the probe in water and then touching the eye ball. The difference in temperature was readily recognised.

The other two patients also had complete corneal opacity. The results of the experiments upon them corroborated those of the first case.

Under the anesthesia produced by cocaine, ocular tenotomy and iridectomy as well as many of the minor operations can be done without producing pain. In iridectomy however, some pain is felt on withdrawing the

iris through the corneal incision, and clipping it off. This may be avoided by the intra-ocular injection of the cocaine, but several cases of hypopion have been reported from its use in this manner, and it is now abandoned.

Cocaine produces slight mydriasis which may last from three to twenty-four hours. It also constringes the blood vessels, thus reducing the amount of hemorrhage in operations about the eye.

Cocaine also reduces or suspends the secretion of the sub-conjunctival glands, rendering the conjunctiva dry and preventing its natural lubrication.

J. F. LANG, M. D.

THE TREATMENT OF CORPULENCE ON PHYSIOLOGICAL PRINCIPLES.

As analysed by the Birmingham Medical Review (Detroit Lancet) Ebstein, in his work on corpulence, gives some practical points for the reduction of obesity.

According to him, fattening is strictly analogous to the fattening of cattle, and depends on over feeding. He, however, disputes the current view that fat makes fat; on the contrary, he thinks fatty food protects the albumen and prevents its forming fat. His plan of treatment, therefore, consists in moderating the quantity of food, and while cutting off all vegetable carbo-hydrates, sugar, starch, etc., allowing a moderate quantity of fat, two or three ounces daily, to be taken. He also suggests that the diet should be monotonous, greasy, and succulent, so as to cause satiety rapidly. He disallows beer, but permits light wines.

The plan advocated appears rational, and is free from the objection of Banting's method, which is too much like starvation. The following is the diet used successfully by Ebstein in one of his cases:

Breakfast.—One large cup of black tea—about half a pint—without sugar; two ounces of white bread or brown bread, toasted, with plenty of butter.

Dinner.—Soup, often with marrow, from four to six and one-half ounces of roast or boiled meat, vegetables in moderation, leguminous preferably, and cabbages. Turnips were almost, and potatoes altogether, excluded. After dinner, a little fresh fruit. For second course, a salad, or stewed fruit without sugar. Two or three glasses of light wine, and immediately after dinner a large cup of tea, without milk or sugar.

Supper.—A large cup of black tea, as before. An egg, a little fat roast meat, or both, or some ham with its fat, bologna sausage, bread well buttered, occasionally a small quantity of cheese, and some fresh fruit.

On this diet the patient lost twenty pounds in six months.

Ebstein insists on the necessity of always keeping to the restricted diet if the tendency to corpulence is to be successfully combated.

THE PATHOLOGICAL ANATOMY AND TREATMENT OF SPINA BIFIDA.

The pathology and treatment of spina bifida are subjects still involved in some uncertainty, and the physician who is called to treat a case always feels that he must exercise the greatest judgment and circumspection. Spina bifida is a rare condition, fortunately, yet mortality rates show that in all probability about one child in every fifteen hundred is born with such defect. An interesting report upon the subject has recently been made by a committee of the London Clinical Society, Mr. R. W. Parker being chairman. This committee made a special study of the numerous specimens illustrating spina bifida in the Museum of the College of Surgeons.

As regards the pathological anatomy their conclusions were that spina bifida presents three different forms. The first and most frequent is that in which there is a protrusion of the spinal meninges together with the spinal cord and its appertaining nerves (meningo-myelocele); in the second form, which stands also second in

frequency, there is a protrusion of the membranes only (simple meningocele); in the last and rarest form there is a protrusion of the membranes together with the spinal cord, the central canal of which is dilated so as to form the sac cavity, the innermost lining being constituted by the expanded and atrophied substance of the cord (syringo-myelocele). A careful dissection is often necessary to distinguish between a simple meningocele and a syringo-myelocele. The committee make the important statement that in the ordinary form of spina bifida (meningo-myelocele) the spinal cord traverses the wall of the sac unchanged, giving off its nerves regularly as it lies in the sac wall. The descriptions of pathological anatomy which imply that the nerves are sent into the sac from an intraspinal portion of the cord are therefore incorrect. The central canal of the cord also, in these cases, continues on through the cord as it runs in the sac wall, and is not unclosed or dilated as has been sometimes asserted.

The theory which best explains the pathological anatomy of spina bifida is that which assumes a primary defect of development of the mesoblast, from which the structures closing in the vertebral furrow are developed. Spina bifida, is not, therefore, primarily a neural defect.

The question of the proper treatment of spina bifida is sometimes a very difficult, and is always a sufficiently unpromising one. In 1882 there were 649 deaths from this condition in England and Wales, 612 of these occurring in infants under one year of age. Undoubtedly this represents the majority of all the cases occurring during that year. Every mode of treatment has secured some successes, but perhaps, up till lately at least, expectant and symptomatic measures have been best. In 1881 Dr. James Morton reported a series of 27 cases, in which he claimed to have obtained 21 cures out of the total operated upon. His method of treatment consisted in injecting, at intervals of seven to ten days, half a drachm of a solution made by dissolving ten grains of iodine and thirty of iodide of potassium in an ounce of

glycerine. The committee of the Clinical Society reported that their collected tables showed a percentage of successes by Morton's treatment of from fifty to sixty. The higher mortality (of forty to fifty per cent.) was due to the fact that the method was adopted in unsuitable cases. Despite it, the committee advocated the plan of treatment by injection, and against that by excision or ligature.—*Med. Record.*

THE INFLUENCE OF SYPHILIS UPON INFANTILE MORTALITY.

At a meeting of the French Academy of Medicine, held March 4, 1885, Dr. Alfred Fournier concluded an address upon the reduced increase of the population of France, with the following observations:

1. Syphilis constitutes an active and powerful cause of infantile mortality; the average deaths due to this cause may be estimated at 68 per 100, of children descended from parents suffering with the disease.

2. The remedies by which this special cause of infant mortality may be diminished are of two classes: *a*. Methodical and sufficiently prolonged medical treatment, and prohibition of premature union of parties suffering from syphilis. *b*. Measures relating to public hygiene (the general prophylaxis of syphilis).

The first are in the hands of the physician, and by using them rigorously the mortality due to infantile syphilis may be much decreased. Measures of the second order, Dr. Fournier held, are in the hands of the health committees and general government, and these, where their resources are inefficient should be improved.—*Annales de Dermatologie et de Syphiligraphie,—Med. News.*

TREATMENT OF CHOLERA.

Drs. T. Lauder Brunton and P. H. Pye-Smith, at the conclusion of a paper upon researches relating to the pathology and treatment of cholera say: We think that

the directions in which further researches after a remedy for cholera are most likely to prove successful are:

1. The discovery of an antiseptic which will destroy pathogenic organisms in the intestine and prevent the formation of the cholera poison, while they are not themselves poisonous. Corrosive sublimate is a sufficiently powerful antiseptic, but it may itself prove poisonous to the patient as well as to the pathogenic organisms. It is possible that amongst the members of the aromatic group of bodies the desired substance may be found having the desired properties.

2. The discovery of some substance which will antagonise the action of the cholera poison after its absorption. As a preliminary step in this direction, further experiments are needed on the nature and action of alkaloidal substances obtained from cholera dejecta as well as from artificial cultivations in various media and under various conditions, electrical and otherwise.

3. Observations on the effect of stimulation of the mesenteric plexus by currents passed through the uninjured abdomen in poisoned animals and in patients suffering from the disease. — *The Practitioner.* — *Med. News.*

PELLETIERINE IN THE TREATMENT OF TAPE-WORM.

M. Bérenger-Féraud, of the French navy, lately made an analytical study of many hundreds of cases of tape-worm observed in the naval hospitals ("Bull. gén. de thérap.") He concludes that the pomegranate is the remedy *par excellence*, and that the alkaloid pelletierine is much to be preferred to any crude preparation of the bark. To be reasonably certain of succeeding with it, however, it is absolutely necessary to observe certain minute details, which may be briefly stated as follows: The day before the attempt is to be made, the patient should be restricted rigorously to a diet of milk, cream, bread, rice and eggs. Beginning at a certain hour the next morning—say six o'clock—the attempt is made

to dislodge the worm. At that hour a dose is given consisting of an infusion of from one third to half an ounce of senna leaves in about three ounces of water, flavored with some aromatic syrup. The patient is to remain in bed. At seven o'clock he takes one half of his dose of pelletierine, the whole dose averaging six or seven grains of the tannate dissolved in syrup. After taking the first dose, the patient is to lie as still as possible, with his eyes closed, in order to reduce the nervous symptons and the tendency to vomit. At half-past seven the remainder of the pelletierine is to be taken, and quietude is to be observed as before, with the eyes closed. At eight o'clock, provided there is no nausea, a purgative dose of castor-oil (proportional to the patient's susceptibility) is taken. He is still to remain quiet until the nervous disturbances and nausea have subsided. The desire to go to stool should be restrained as long as possible; if it does not occur soon, a purgative enema (of senna or sulphate of sodium) is to be given. In some cases it is well to give an enema of the sulphate of sodium and a decoction of pomegranate root. The vessel on which the patient is to sit should contain warm water, to lesson the liability of rupture of the worm when it has been partly expelled. On no account should the patient rise from the vessel until the whole worm has been voided, provided any part of it has appeared; and no traction should be made upon the worm. Partial or complete failure of the expulsion is best remedied by copious injections containing sulphate of sodium. In case vomiting occurs after one of the doses of pelletierine, more is to be given at once, the amount being in inverse proportion to the length of time since the preceding dose was taken.—*N. Y. Med. Journal.*

THE TREATMENT OF INTUSSUSCEPTION.

In this paper, read before the Medical Society of London, the author reviews all the important points in the pathology and treatment of intussusception. He classifies the disease anatomically into four varieties; the en-

teric, colic, ileo-cæcal and ileo-colic: and he gives the relative frequency of these as 30, 18, 44 and 8 per cent., respectively. Clinically, he divides them into the ultra acute, the acute, the sub-acute, and chronic—a classification of more practical utility.

Of the most important complications, strangulation and obstruction take a foremost part, but it is by no means necessary for these to coexist, and they may even both be absent. He considers that strangulation is primarily due to compression of the mesenteric vessels, and secondarily to the edematous swelling at the neck of the intussusception, and he enumerates the following causes of obstruction: (1) The orifice of the intussusception is rendered slit-like by the dragging on the mesentery, and is sometimes opposed to the wall of the intussuscepting part. (2) The inner and middle cylinders are much bent upon themselves, especially in cases where the small intestine is involved. (3) These cylinders may become enormously thickened by congestion and inflammation. (4) The lumen of the bowel may become plugged by coagulated blood, or by ingesta. (5) There may be a polyp at the apex of the intussusception. Speaking of spontaneous elimination, he states that this termination takes place in about 42 per cent. of cases of intussusception, being very much more common in the enteric variety, whereas it is rarer in the more common ileo-cæcal form.

Forty per cent. of the cases of spontaneous elimination terminate fatally from perforation, hemorrhage, diarrhœa, and obstruction. Mr. Treves concludes, from an extended examination of museum specimens and recorded cases, that stricture, following the elimination of a gangrenous intussusception, is of extreme rarity.

The first indication for treatment recommended is to quiet all peristalsis by opium, and then to try reduction by means of a large injection of warm water, or air, for both of which purposes he recommends the instrument of Mr. Lund, the rubber collar effectually preventing escape of fluid or air at the anus. Failing relief by these measures, he urges the immediate resort to laparotomy, which

he justly considers as imperative as the performance of kelotomy when taxis has failed in strangulated hernia.

The great mortality hitherto attending this operation is, with good reason, assigned to the late period at which it is often undertaken, and no doubt future statistics will present a more favorable aspect. With regard to the performance of the operation, the following rules are laid down: Except in exceptional cases, the incision is best made in the middle line. The intussuscepted mass should be, as far as possible, exposed in the wound, and attempts at reduction made by pulling on the entering bowel with one hand, while the intestine about the lower end of the intussusception is gently squeezed with the other. No violent or long continued attempts at reduction should be made, and, after the reduction is completed, if the viability of the intestine is doubtful, or if it is gangrenous or irreducible, resection should be practiced, the ends of the divided bowel being stitched to the wound, and the artificial anus can at a future time be closed. The attempt to at once stitch the divided ends together not having hitherto proven satisfactory, simple enterotomy and colotomy are both condemned, as, although relieving obstruction, they leave in the abdomen an invaginated intestine, in which the process of inflammation and gangrene can still advance.—*F. Treves in Brit. Med. Journ.*

DANGEROUS HEMORRHAGE FROM RUPTURE OF THE VAGINA DURING FIRST COITUS.

Case 1. In October, 1881, I was called early in the morning to a hotel in this city to see a lady who had been married on the previous day. I found her in a state of collapse, pale, with occasional momentary loss of consciousness, all due to a violent hemorrhage immediately following the first coition. The husband, a physician himself had vainly tried to arrest the hemorrhage by compression and persulphate of iron. Inspection showed blood trickling from the vaginal orifice and a slight rent of the hymen at the left anterior border, which however, did not bleed; digital examination re-

vealed a vagina distended with coagula, thus indicating that the blood flowed inward, as though from an internal wound. Placing the patient on the left side, I introduced Sims's speculum, cleared the vagina thoroughly of all coagula, and then at once saw the blood spurting from a deep fissure about an inch long, which extended inward from the nick in the hymen to the left and parallel with the urethra. Tight tamponing of the vagina with disks of alum-cotton, carried down to the vulva, arrested the bleeding at once and permanently, and no further trouble was experienced. Here really the rent was intra-vaginal, its starting-point merely being the hymen.

Case 2. April 16, 1883, I was called, in the evening, to see a lady twenty-two years of age, married the day before. The messenger said she was bleeding, and I suspected a similar injury to that in the previous case. I found a waxy-looking, evidently very feeble patient, who stated that coitus had been performed but once, toward morning, had been rather painful, that she then went to sleep, and was awakened some hours later by feeling wet about the genitals, and found herself lying in a pool of blood. A physician was sent for, who gave ergot, but made no examination. The patient continued to ooze, and another physician was sent for, who ordered ice to be applied over the abdomen, but also made no examination.

The hemorrhage continuing, he sent for me. I examined her by gaslight, and could detect no bleeding spot on the hymen. The examining finger found the vagina full of coagula. Through Sims's speculum the vagina was thoroughly cleansed, and a deep rent fully two and a half inches in length and half an inch in depth was at once seen in the left vaginal wall, extending from about an inch above the hymen nearly to the cul-de sac. The edges of the rent were ragged, and its base bruised and torn. A firm tamponade with alum-cotton disks effectually controlled the bleeding, and when the patient called at my office, a week later, the wound was in a fair way toward closure.

In neither of these cases did there seem to be a disproportion of the relative organs, nor could I learn that any unusual violence had been used. The vaginæ were apparently perfectly healthy, both ladies being young and of good constitution.

In the second case of Zeiss, quoted by Dr. Chadwick, the recent confinement of the woman and the adhesion of the cervix to the lacerated side of the vagina would readily account for the friability of the tissues, as would also the senile atrophy of the vagina in Dr. Chadwick's own case. I recollect reading a similar case in a Canada medical journal a few years ago, where a sailor had been away from home for nine years, and on first coition with his wife on his return ruptured her vaginal vault to such an extent that she had to be taken to the hospital (in Montreal, I believe), and came near dying. She had not as yet, if I remember correctly, reached the menopause.

It is strange that two such accidents should have been produced by sailors, whose reputation for abstinence, when away from home, is not of the best.

The treatment must obviously consist in the tamponade, repeated as long as danger of recurrence exists, or, if the rent is external, where a vaginal tampon cannot well touch it, the deep suture.—*Bost. Med. and Surg. Journ.*

ENTERITIS FOLLOWING THE USE OF CORROSIVE SUBLIMATE IN THE ANTISEPTIC TREATMENT OF WOUNDS.

In *Virchow's Archives* (Vol. 99, p. 276) appears a paper by Fraenkel, which gives an analysis of fourteen fatal cases of sublimate poisoning occurring in the Hamburg General Hospital during a period of two and a half years. The cases were in the surgical ward; seven were of abscess; two, caries of the vertebræ with abscess; a psoas abscess; a case of amputation of the upper thigh in senile gangrene; an amputation of the breast for cancer; a myotomy; a laparotomy with excision of the body of the uterus and right appendages, on account of my-

omata; a case of supra-hepatic operation upon an echinococcus cyst. All these patients were anemic, or exhibited a general adiposity, especially of the heart. In all the cases large surfaces of the body, either externally or internally, were in contact with the sublimate. The most conspicous clinical symptom was bloody diarrhœa; salivation or stomatitis were not observed.

Fraenkel considered the drug to be the direct cause of death in two cases only—extirpation of mamma and multiple gangrene of the skin of both legs; The pathological character of the enteritis was invariably excessive inflammation of the intestinal mucous membrane, resulting in necrosis of that structure; the colon was chiefly the seat of the lesion, the small intestine being exceptionally affected and never without the colon. The worst cases exhibited a condition of the intestine altogether similar to that of the severest true dysentery. Other organs presented no involvement.

Fraenkel advises care in the use of the antiseptic when the patient is badly nourished or in cases of excessive accumulation of fat. The drug should be used in the weakest practicable solution and superfluous deluging of the wound should be avoided.—*Courier of Med.*

TREATMENT OF IRITIS.

The symptoms of iritis are very constant, no matter whether the affection be due to syphilis, rheumatism, or any other cause. The patients complain of orbital and periosteal pains; the cornea is injected; the coloration of the iris becomes altered; the membrane itself grows infiltrated and prominent, reacting but feebly to light; the pupil shows irregularities due to adhesions. Later the aqueous humor grows cloudy, and occasionally we observe minute grayish deposits on what is known as the membrane of Descemet. We then have to deal with the so-called punctuated keratitis (serous iritis).

The diagnosis having been established, our first therapeutic interference is to be directed toward complete dilatation of the pupil by atropine. If the action of the

atropine instillation be not powerful enough, two drops of a five per cent. solution of cocaine seem to double the action of that alkaloid as asserted by Dr. Davier (*Progres Medicale*, April 4, 1885). If the pupil should nevertheless remain contracted and the corneal injection cause ecchymosis, leeches or cups applied to the temple are advised. The inunction of a belladonna ointment into the temples will be found useful in every case, regardless of its orgin. Excessive pains call for injections of morphine or for chloral; warm compresses to the eyelids are an especially grateful application. These are the outlines of the general treatment of iritis when definite causative data are absent.

If a specific nature of the affection be either established or suspected, mercurial inunctions and iodide of potassium internally (30 grains daily) are to be insisted upon.

In absence of any specific taint, we can often detect a rheumatic element; then salicylate of sodium is to be exhibited. Additional relief will always be afforded by warm baths, dry frictions, and air-baths. Cases of tertiary syphilis presenting iritic symptoms will require the hypodermic employment of corrosive sublimate. In absence of all etiological indication in what is termed simple iritis, mercurial inunction and the iodide of potassium are still useful as interstitial absorbents. Therefore, if a rheumatic diathesis cannot be ascertained, the specific treatment is invariably to be resorted to first.

An energetic and sufficiently long-continued treatment will usually prevent the chronic form of this affection, which of course implies grave troubles.—*Therap. Gazette.*

LONGEVITY OF THE JEWS.

The health and longevity of this race has been, for many years, a source of surprise to all thinking people.

Not only does the Jewish race enjoy immunity from many diseases, but their rate of mortality, under various epidemics, is much lower than that of other nations—showing the possession of sounder constitutions. Apropos of this subject, Dr. Picard has contributed an ar-

ticle to "*Leisure Hours*," in which this question is discussed at length. He notes that in the town of Furth, the statistics compiled by Mayer, show that the average duration of life among the Christians was 26 years, while that of the Jews was 37 years. During the first five years of childhood, the death rate was 10 per cent, against 14 per cent for other nations. The same ratio holds good in London. In Frankfort it has been found that the Jews live eleven years longer than the Christians.

The same increase was found in the birth-rate. In Prussia, the Jewish population have increased by 3.5 per cent more than the Christians. Here as well as elsewhere, was noted fewer deaths in addition to the higher birth-rate.

This superiority of the Jews, in the matter of health and longevity, he considers as undoubtedly due to three causes, namely: Their stringent health laws; their temperate habits, and the care taken of their indigent and infirm.

The Mosaic, like the olden Egyptian code, is very stringent regarding the eating of flesh and other articles of food. This is shown by the yearly reports, by which it appears that of the animals examined, a large proportion were condemned as unfit for food. Thus, in one instance, out of 37 beasts slain, 14 were rejected as unsound. In this way, the chances of infection from the various bovine diseases, especially tuberculosis, are reduced to a minimum.

The temperate use of alcoholic drinks, for which the Jewish race is noted, has a direct bearing upon longevity, for this factor acts by rendering the system less susceptible to the action of disease germs, as well as better fortified against the ravages of the disease, when contracted.

Their immunity from diseases resulting from mental over-work is, doubtless, to be accounted for by their strict observance of the Sabbath, which, in Christian countries, often necessitates two days rest. To this, probably, may be attributed their capacity for brain work, and mental activity.

There is no better witness of the high value of the Mosaic code as a sanitary institution, than the past and present status of the Jewish race, which has survived and even increased and multiplied under conditions of war, famine and pestilence.—*N. E. Med. Monthly.*

THE PNEUMONIA-COCCUS OF FRIEDLANDER.

Dr. Sternberg calls attention to the so-called pneumonia-coccus of Friedlander, which he claims is, in fact, identical, specifically, with a micrococcus which he previously described, and which is found in normal human saliva, and with that found by Pasteur in the blood of rabbits which had been injected with the saliva of a child which died of hydrophobia in one of the Paris hospitals. This micrococcus he names *Micrococcus-Pasteuri.* The capsule, or mucous envelope, which sometimes surrounds this micrococcus, described by Friedlander in 1883, and photographed by Sternberg two years previously, cannot be accepted as a distinguishing character of these species, inasmuch as it is not constantly present, and the circumstances upon which its development depends have not been accurately determined. It is established that this is a pathogenic organism, as far as certain lower animals are concerned, and that its pathogenic power varies under different circumstances. It seems extremely probable that this micrococcus is concerned in the etiology of croupous pneumonia, and that the infectious nature of this disease is due to its presence in the fibrinous exudate into the pulmonary alveoli. But this cannot be considered as definitely established by the experiments which have thus far been made upon lower animals. The constant presence of this micrococcus in the buccal secretions of healthy persons indicates that some other factor is required for the development of an attack of pneumonia ; and it seems probable that this other factor acts by reducing the vital resisting power of the pulmonary tissues, and thus making them vulnerable to the attacks of the microbe. This supposition enables us to account for the development of the numerous cases of pneumonia which

cannot be traced to infection from without. The germ being always present, auto-infection is liable to occur whenever from alcoholism, sewer-gas poisoning, crowd-poisoning, or any other depressing agency, the vitality of the tissues is reduced below the resisting-point. We may suppose also that a reflex vasomotor paralysis, affecting a single lobe of the lung, for example, and induced by exposure to cold, may so reduce the resisting power of the pulmonary tissue as to permit this micrococcus to produce its characteristic effects. Again, we may suppose that a person whose vital power is reduced by any of the causes mentioned may be attacked by pneumonia from external infection with material containing a pathogenic variety of this micrococcus having a potency, permanent or acquired, greater than that possessed by the same organism in normal buccal secretions.—*The American Journal of the Medical Sciences.—Med. Record.*

Current Literature.

Report of the State Board of Health of Tennessee for 1880-84.

A number of very valuable papers are contained in this volume. We call especial attention to the reports on School Hygiene, by Dr. D. F. Wright, on Prisons in Tennessee, by Dr. P. D. Sims, and on Gulf Coast Quarantine by Dr. G. B. Thornton. The excellent general report of the secretary, Dr. J. Berrien Lindsley also deserves a careful perusal.

Report of the State Board of Health of Rhode Island for 1884.

This volume contains, besides the general report of the secretary, a portion of the report of Mr. Samuel M. Gray, City Engineer of Providence on "Sewerage Systems and Sewage Disposals," and the Preliminary Report of the Committee on Disinfectants of the American Public Health Association.

Editorial.

THE INTERNATIONAL MEDICAL CONGRESS.

To cut off one's nose and disfigure one's face, is a terse way of characterising any ill-considered or spiteful action. We think it is particularly applicable to those members of the profession who have by their declination of honors, conferred upon them in connexion with the International Medical Congress of 1887, endeavored to endanger the success of the Congress. We have no doubt that many who have signed the resolutions declaring that the recent action of the American Medical Association, has imperilled the prospects of the Congress, have done so under misapprehension.

The situation seems to us about as follows: A few members of the original committee did not relish the discipline administered by the Association for their unjust, narrow-minded and partisan action in making up their lists of officers of sections. After vainly objecting to the constitutionality of the new Committee, *which is now the only existing organisation authorised to make arrangements for the meeting of the Congress*, they have resigned, and induced a number of their friends to follow their course. They were apparently determined to rule or ruin.

Failing in the first they attempted the latter. We predict however that this policy will fail to work satisfactorily for the kickers.

We fail to see how the official decapitation of a few of the original appointees can work serious harm to the Congress. Under the instructions of the American Medical Association, the New Orleans Committee could take no other action than was taken at its meeting in Chicago. The New Code men were obliged to go.

We believe the great mass of the profession is in favor of having an International Medical Congress in this country two years hence. We believe that the profession, barring a few malcontents, have confidence in the only body now having authority to make the necessary arrangements for the Congress.

We cannot help thinking that many of those who have so hastily declined participating in the work of organising the Congress have overestimated their own importance. They do not comprise all the wisdom of the profession in this country.

We believe that the present Committee on organisation fully understands its duty, responsibility and power, and we trust that it will decline to accept the resignations tendered, unless more satisfactory reasons are given than hitherto.

Finally we ask a suspension of judgment on the Committee's acts until the full report of its work is published.

We do not suppose every body will be satisfied with everything the committee does; but we doubt not its action will be just and proper. Its members are as worthy of trust as are those of the original committee who have resigned; and they are probably less likely to be swayed by motives similar to those which seem to have actuated the latter in making up the first list of appointments.

THE CHRONICLE AND ITS SUCCESSOR.

With this issue the MEDICAL CHRONICLE, in its present form, ceases to appear. Hereafter it will be combined with the PHILADELPHIA MEDICAL TIMES, and will appear every other Saturday under the title: THE MEDICAL TIMES.

The typography of the new journal will be unexcelled, and no pains will be spared to make it representative, not only of the two great medical centres, Philadelphia and Baltimore, but of the best medical thought and work of the whole country.

THE TIMES will be under the chief editorial charge of Dr. Frank Woodbury, so long and favorably known as a medical journalist, and will be published by the J. B. Lippincott Co., the well known publishers of Philadelphia.

The Baltimore department will be under the control of the present editor of the CHRONICLE and our readers may rest assured that their interests will not be neglected.

Our paid up subscribers will be transferred to the subscription list of the TIMES.

Flotsam.

FERRAN has been shown to be a fraud.

FOUR cases of trichinosis have recently been observed in this city.

FATAL accidents due to contact with electric light wires are becoming numerous.

THE American Dermatological Association will meet at Greenwich Ct. during the last week in August.

THE classmates of Dr. W. W. Leonard (C. P. S., 1883,) will be glad to learn that he has been appointed physician to the Cleveland Hospital for the Insane.

THE revelations of the *Pall Mall Gazette*, if true, show a rather low standard of morality on the part of some prominent members of the profession in the English Metropolis.

DANIEL'S *Texas Medical Journal*, is a new venture in medical journalism. Dr. F. E. Daniel, formerly of the *Courier-Record* is the editor. We wish him success. The first number is very lively.

THE National Board of Health reports from March 4 to July 4, 28,044 cases of cholera, with 12,347 deaths having occurred in Spain. Since July 4, the mortality has probable been more than doubled. As yet there is very little evidence of preparation on the part of our City authorities.